SAMSUNG TECHWIN

NETWORK VIDEO RECORDER

User Manual

SRN-470D/1670D

CE

SAMSUNG

Network Video Recorder
User Manual

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Warranty

If the product does not operate properly in normal conditions, please let us know. Samsung Techwin will resolve the problem for free of charge. The warranty period is 3 years. However, the followings are excluded:

- Data loss due to a damaged hard disk
- If the system behaves abnormally because you run a program irrelevant to the system operation.
- Data loss due to virus infection
- Deteriorated performance or natural worn-out in process of time
- Sensory phenomenon that does not affect the performance or quality of the product (ex: working noise).

❖ **Design and specifications are subject to change without prior notice.**

❖ **The default password can be exposed to a hacking thread so it is recommended to change the password after installing the product.**
Note that the security and other related issues caused by the unchanged password shall be responsible for the user.

IMPORTANT SAFETY INSTRUCTIONS

Read these operating instructions carefully before using the unit.
Follow all the safety instructions listed below.
Keep these operating instructions handy for future reference.

1) Read these instructions.
2) Keep these instructions.
3) Heed all warnings.
4) Follow all instructions.
5) Do not use this apparatus near water.
6) Clean only with dry cloth.
7) Do not block any ventilation openings, Install in accordance with the manufacturer's instructions.
8) Do not install near any heat sources such as radiators, heat registers, stoves, or other apparatus (including amplifiers) that produce heat.
9) Do not defeat the safety purpose of the polarized or grounding- type plug. A polarized plug has two blades with one wider than the other. A grounding type plug has two blades and a third grounding prong. The wide blade or the third prong are provided for your safety. if the provided plug does not fit into your outlet, consult an electrician for replacement of the obsolete outlet.
10) Protect the power cord from being walked on or pinched particularly at plugs, convenience receptacles, and the point where they exit from the apparatus.
11) Only use attachments/accessories specified by the manufacturer.
12) Use only with the cart, stand, tripod, bracket, or table specified by the manufacturer, or sold with the apparatus. When a cart is used, use caution when moving the cart/ apparatus combination to avoid injury from tip-over.

13) Unplug this apparatus during lightning storms or when unused for long periods of time.
14) Refer all servicing to qualified service personnel. Servicing is required when the apparatus has been damaged in any way, such as power-supply cord or plug is damaged, liquid has been spilled or objects have fallen into the apparatus, the apparatus has been exposed to rain or moisture, does not operate normally, or has been dropped.

Standards Approvals

FC CE

- This equipment has been tested and found to comply with the limits for a Class A digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference when the equipment is operated in a commercial environment.
  This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instruction manual, may cause harmful interference to radio communications. Operation of this equipment in a residential area is likely to cause harmful interference in which case the user will be required to correct the interference at his own expense.

BEFORE START

This user manual provides Information for using the NVR such as brief introduction, part names, functions, connection to other equipment, menu setup, etc.
You have to keep in mind the following notices :

- SAMSUNG retains the copyright on this manual.
- This manual cannot be copied without SAMSUNG's prior written approval.
- We are not liable for any or all losses to the product incurred by your use of non-standard product or violation of instructions mentioned in this manual.
- Prior to opening the case, please consult a qualified technician first. Whenever this is needed power must be removed from the unit.
- Before installing an additional HDD or connecting an external storage device (USB memory or USB HDD) to this NVR, check the compatibility. Consult your provider for the compatibility list.

Warning

❖ Battery

It is essential that when changing the battery in the unit, the replacement battery must be of the same type otherwise there may be a possibility of an explosion.
The following are the specifications of the battery you are using now.

- Normal voltage : 3V
- Normal capacity : 170mAh
- Continuous standard load : 0.2mA
- Operating temperature : -20°C ~ +85°C (-4°F ~ +185°F)

CALIFORNIA USA ONLY
This Perchlorate warning applies only to primary CR (Manganese Dioxide) Lithium coin cells in the product sold or distributed ONLY in California USA.
"Perchlorate Material - special handling may apply,
See www.dtsc.ca.gov/hazardouswaste/perchlorate."

Caution

- Connect the power cord into a grounded outlet.
- The Mains plug is used as a disconnect device and shall stay readily operable at any time.
- Batteries shall not be exposed to excessive heat such as sunshine, fire or the like.
- Risk of Explosion if Battery is replaced by an Incorrect Type. Dispose of Used Batteries According to the Instructions.

❖ System Shutdown

Turning off the power while the product is in operation, or undertaking improper actions may cause damage or malfunction to the hard drive or the product.
Please turn off the power using the Power button on the front of your NVR.
After selecting <**OK**> in the pop-up menu, you can pull off the power cord.
You may want to install a UPS system for safe operation in order to prevent damage caused by an unexpected power stoppage. (Any questions concerning UPS, consult your UPS retailer.)

❖ Operating Temperature

The guaranteed operating temperature range of this product is 0°C ~ 40°C (32°F ~ 104°F).
This product may not work properly if you run right after a long period of storage at a temperature below the guaranteed one.
Prior to using a device that has been stored for a long period in low temperatures, allow the product to stand at room temperature for a period.
Especially for the built-in HDD in the product, its guaranteed temperature range is 5°C ~ 55°C (41°F ~ 131°F).
Likewise, the hard drive may not work at a temperature below the guaranteed one.

❖ Ethernet Port

This equipment is in door use and all the communication wirings are limited to inside of the building.

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FEATURES

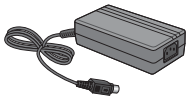
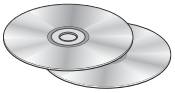
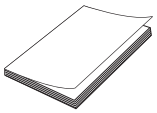
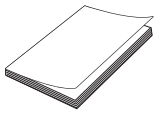
With this NVR, you can record and play the video and audio signal from a network camera.
Furthermore, you can transfer video and audio to an external device, which can be monitored by a remote PC.

- User-friendly UI
- VGA, 4CIF, record in a max of 2048x1536 (3M pixel) supported
- Record and play video
- Record and play audio
- Standard RTP/RTSP protocols supported
- Play high-definition video using the HDMI cable
- Display the HDD operation status by HDD SMART
- HDD overwrite enabled
- Mass-storage HDD supported using eSATA
- Backup using USB 2.0 protocols and external HDD
- Backup using the internal CD/DVD writer
- Simultaneous play of 4 channels
- Various Search Modes (Search by Time, Event and Backup)
- Various Recording Modes (Normal, Event, Scheduled Recording)
- Alarm Input / Output
- Remote Monitoring function by Windows Network Viewer
- Live monitoring of the network camera

Package Contents

Please unwrap the product, and place the product on a flat place or in the place to be installed.
Please check the following contents are included in addition to the main unit.

SRN-470D

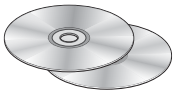
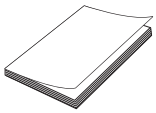
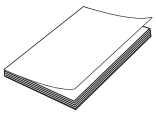
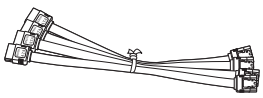
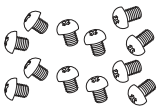
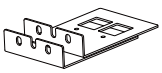
NVR	Remote Control / Remote Control Battery (AAA)	Mouse
		
Power Cable	Adaptor	Network Viewer Software / User Manual CD
		
User Manual	Quick Guide	

■ For a model with no built-in HDD, one SATA cable and 4 screws for fixing the HDD will be added by default.

❖ Power Adaptor

- Input : AC100~240V, 50/60Hz, 1.2A
- Output : DC12V - 4 A

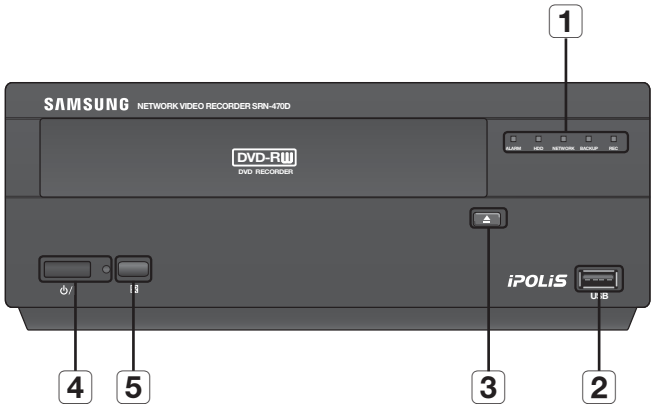
SRN-1670D

NVR	Remote Control / Remote Control Battery (AAA)	Mouse
		
Power Cable	Network Viewer Software / User Manual CD	User Manual
		
Quick Guide	SATA Cable	HDD Fixing Screw
		
Bracket Fixing Screw	Bracket Rack	

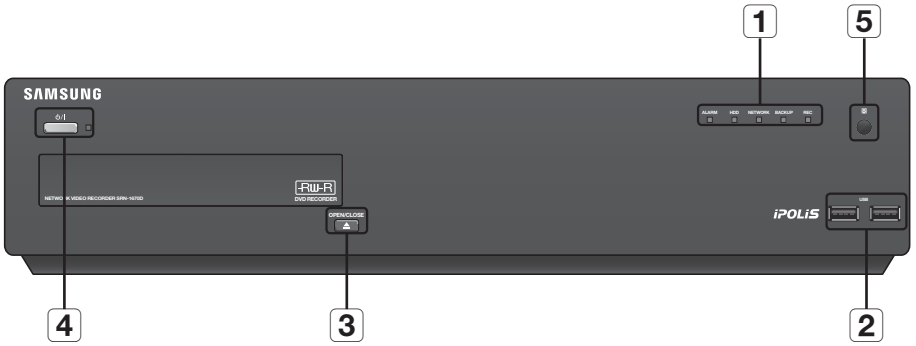
■ For a model with no built-in HDD, one SATA cable and 3 screws for fixing the HDD will be added by default.

PART NAMES AND FUNCTIONS (FRONT)

SRN-470D



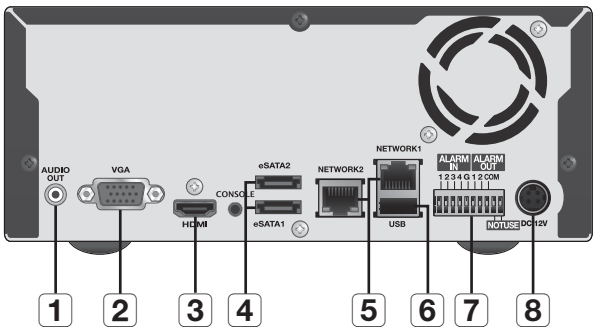
SRN-1670D



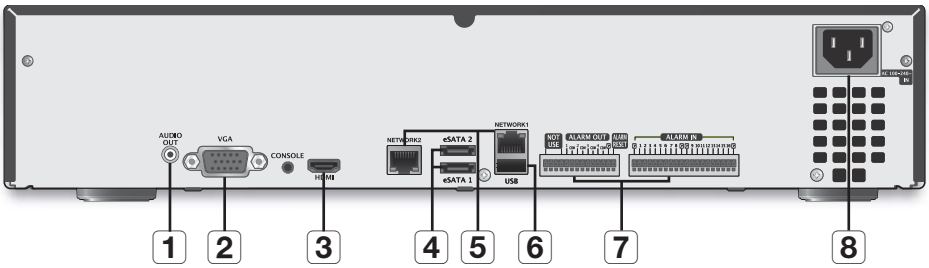
Part Names		Functions
1	LED Indicator	**ALARM** : Lights on when an event occurs.
		HDD : Displays the normal access to HDD. Upon access to HDD, LED repeats on and off.
		NETWORK : Displays both network connection and data transfer status.
		BACKUP : Displays when Backup is in progress.
		REC : Lights on when recording is in progress.
2	USB	Connects the USB devices.
3	OPEN/CLOSE	Used to open and close the DVD-RW disc tray.
4	Power	**Power LED** : Displays the power ON/OFF status. **Power Button** : Used to turn the NVR ON/OFF.
5	Remote Reception System	Receive the signal from the remote control.

PART NAMES AND FUNCTIONS (REAR)

SRN-470D

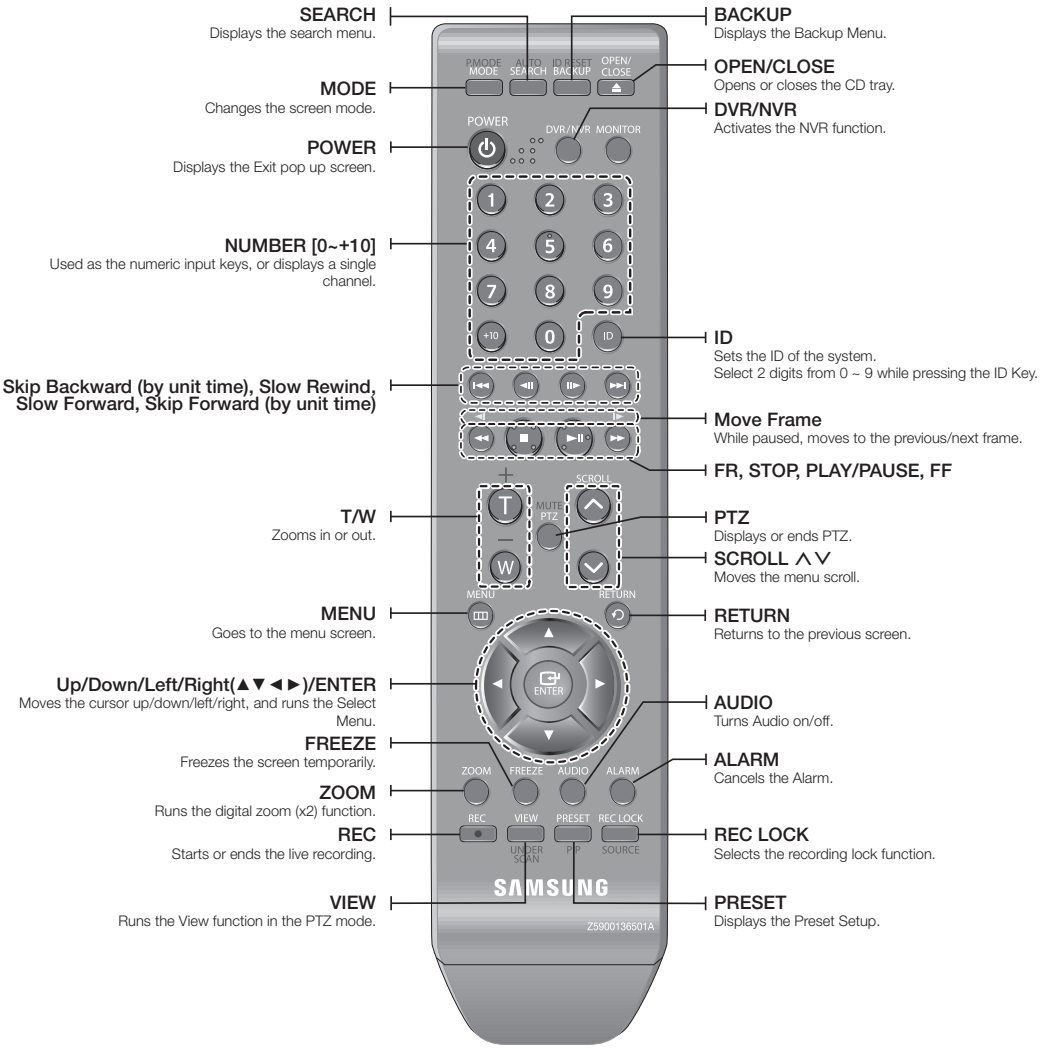


SRN-1670D



Part Names		Functions
1	AUDIO OUT	Audio Signal Output Port (RCA jack).
2	VGA	VGA Video Signal Output Port.
3	HDMI	HDMI connector port.
4	eSATA 1/2	Ports used for external storage device connections.
5	NETWORK 1/2	NETWORK connector port.
6	USB	USB connector port.
7	ALARM	- ALARM IN : Alarm input ports. SRN-470D : 1~4 CH SRN-1670D : 1~16 CH - ALARM RESET : Alarm Reset port ▪ This is applicable only to SRN-1670D. - ALARM OUT : Alarm output ports. SRN-470D : 1~2 CH SRN-1670D : 1~4 CH
8	Power	Power connection port.

REMOTE CONTROL



Using the numeric buttons

CHANNEL 10	Press the [**+10**] button first, then press the 0 button again within 3 seconds.
CHANNEL 11–16	Press the [**+10**] button first, then press any number between 1 to 6 within 3 seconds.

Changing the Remote Control ID

1. Press the [**ID**] button of the remote control and check the ID displayed on the NVR screen.
   The factory default ID of the remote control is 00.
2. Enter 2 digits of your selection in order, while pressing the system [**ID**] button.
3. When ID input is done, press the system [**ID**] button again to check the setting.

- If you want to change the remote control ID to 08: Press and hold the system [**ID**] button and press the numbers [**0**] and [**8**] in sequence.
  Remote control's ID and NVR's ID should be matched for proper operation. Refer to "**Remote Devices**". (Page 58)

installation

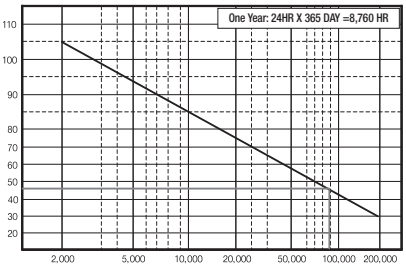
Please take note of the followings before using this product.

- Do not use the product outdoor.
- Do not spill water or liquid in the connection part of the product.
- Do not impose the system to excessive shock or force.
- Do not pull out the power plug forcefully.
- Do not disassemble the product on your own.
- Do not exceed the rated input/output range.
- Use a certified power cord only.
- For the product with an input ground, use a grounded power plug.

CHECKING THE INSTALLATION ENVIRONMENT

This NVR is a top-notch security device that is equipped with a high-capacity HDD and other key circuit boards.

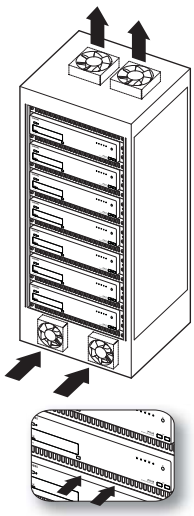
Note that an excessive internal temperature of the product may cause a system failure or a shortened product life (see the right figure). Keep in mind the following instructions before installing the product.



[Figure 1]

The followings are the recommendations when Samsung NVR is installed on a rack.

1. Please ensure that the rack inside is not sealed.
2. Please ensure the air is circulated through the inlet/outlet as shown in the picture.
3. If the NVR or other devices on a rack is to be stacked as in the picture, provide a suitable space or install a ventilating opening for air circulation.
4. For natural air convection, place the inlet at the bottom of the rack and the outlet on top.
5. It is strongly recommended that a fan motor is installed at the inlet and the outlet for air circulation. (Please fit a filter at the inlet to screen dust or foreign substances.)
6. Please maintain the temperature inside the rack or surrounding areas between 0°C ~ 40°C (32°F ~ 104°F) as shown in the figure 1.



[Figure 2]

Rack Mount Instructions - The following or similar rack-mount instructions are included with the installation instructions :

A) Elevated Operating Ambient - If installed in a closed or multi-unit rack assembly, the operating ambient temperature of the rack environment may be greater than room ambient. Therefore, consideration should be given to installing the equipment in an environment compatible with the maximum ambient temperature (Tma) specified by the manufacturer.

B) Reduced Air Flow - Installation of the equipment in a rack should be such that the amount of air flow required for safe operation of the equipment is not compromised.

C) Mechanical Loading - Mounting of the equipment in the rack should be such that a hazardous condition is not achieved due to uneven mechanical loading.

D) Circuit Overloading - Consideration should be given to the connection of the equipment to the supply circuit and the effect that overloading of the circuits might have on overcurrent protection and supply wiring. Appropriate consideration of equipment nameplate ratings should be used when addressing this concern.

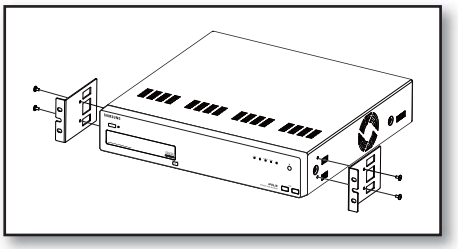
E) Reliable Earthing - Reliable earthing of rack-mounted equipment should be maintained. Particular attention should be given to supply connections other than direct connections to the branch circuit (e.g. use of power strips).

installation

RACK INSTALLATION

Install the Bracket-Rack as shown in the figure, and then fasten the screws on both sides (2 screws on each side).

- Fix the screws not to be loosened by vibrations.



HDD ADDITION

Make sure to unplug the power cord from the wall outlet to prevent possible electric shock, injury or product damage. Please consult your provider for further information on HDD installation since improper installation or settings may damage the product.

- Number of HDDs supported : SRN-470D : Up to 1
  SRN-1670D : Up to 5 HDDs supported
- Make sure to unplug the power cord from the wall outlet before proceeding with the installation.
- By default, a HDD-equipped model has one HDD built-in as master.

- **Cautions for data loss (HDD care)**
  Please pay attention so that the data inside the HDD is not damaged.
  Before adding a HDD, please check the compatibility with this NVR product.
  HDD is vulnerable to malfunction due to its sensitive nature especially against shock when operating.
  Please ensure that the HDD is free from such shock.
  We are not liable for any damage to the HDD incurred by user's carelessness or miss use..

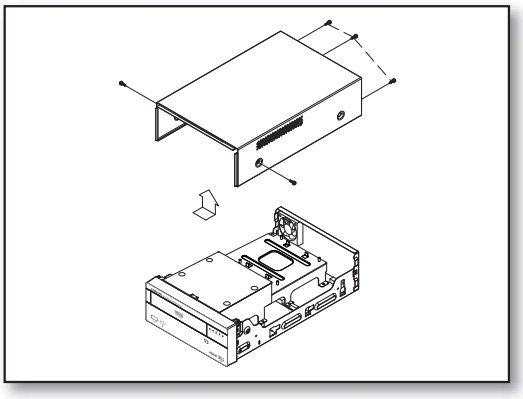
- **Cases might cause damage to HDD or recorded data**
  To minimize the risk of data loss from a damaged HDD, please backup data as often as possible.
  Data may be lost due to external impacts during disassembly or installation of the NVR.
  HDD may be damaged if the NVR is suddenly stopped by a power cut or power off during operation.
  HDD or files stored inside may be damaged if the main body is moved or impacted during the HDD operation.

Cautions when installing a HDD

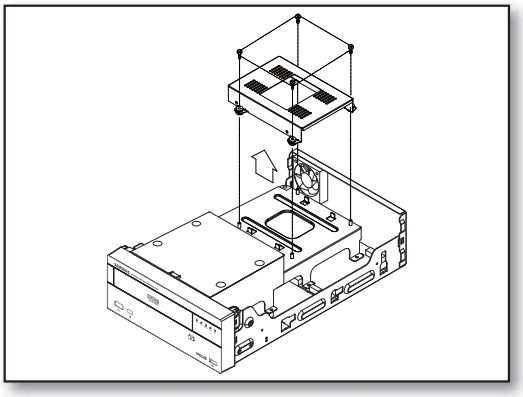
1. When adding a HDD, ensure that the cable does not get caught or the insulation does not come off.
2. Pay attention so as not to lose the disassembly screws or accessories.
   - If the screws or accessories are not put together correctly, the product may breakdown or not operate properly.
3. Please check the HDD compatibility before adding a HDD.
   - Please contact your nearest dealer to obtain the list of compatible devices.

If installing HDD to SRN-470D

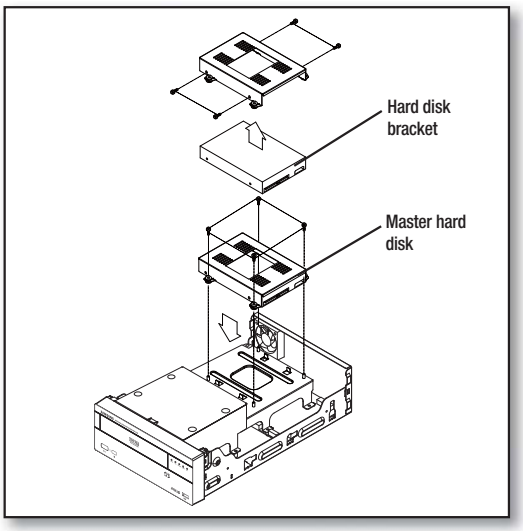
1. First, loosen the screws on both sides and remove the cover.



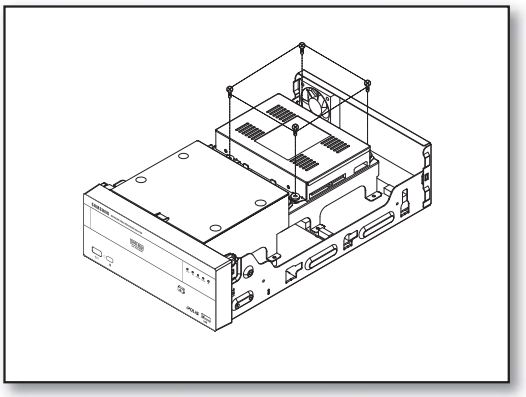
2. Loosen the left and right screws on the lower hard disk bracket to remove it.



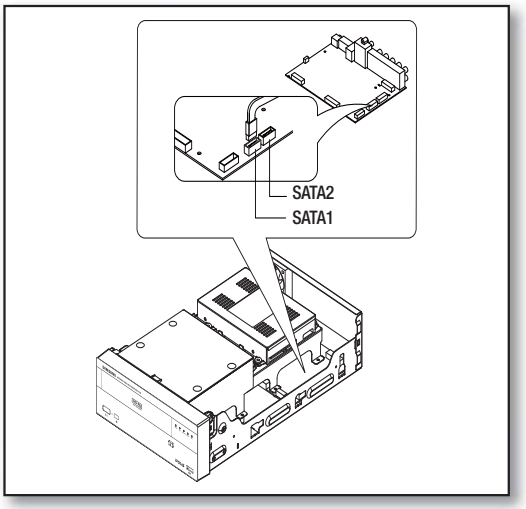
3. Insert the additional hard disk into the bracket and fix it using the provided screws.



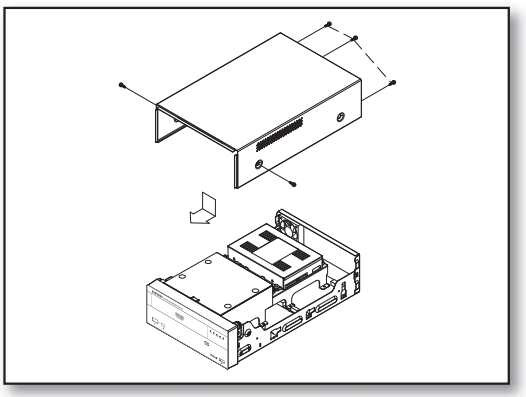
4. Insert the bracket where the additional hard disk is inserted into the lower bracket and fix it using the provided screws.



5. When done, connect the power cable and connect the signal cable (SATA cable) to the connector for the main board.

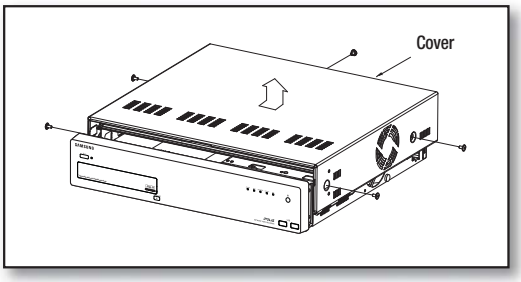


6. Check if the connectors are properly connected and there is no problem with wiring, and close the cover and fix it with screws.

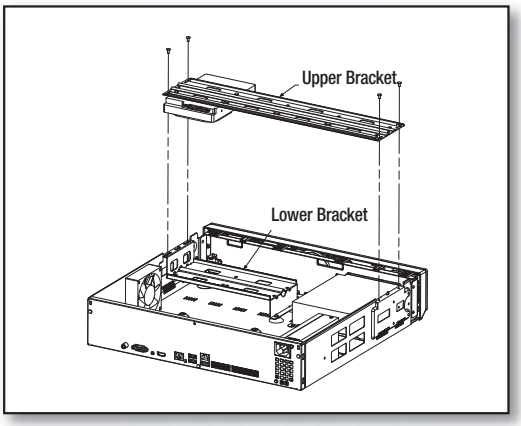


If installing HDDs to SRN-1670D

1. First, loosen the screws on both sides and remove the cover.

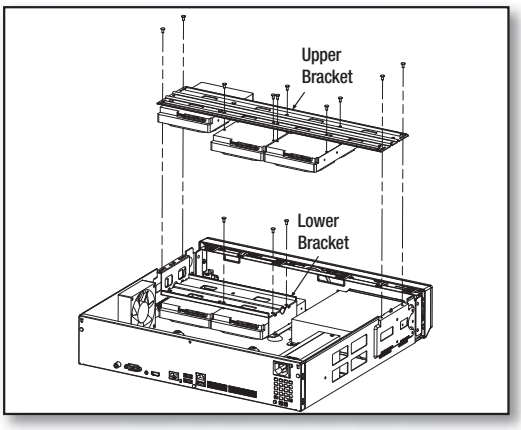


2. Loosen the screws (x4) in the left/right and upper sides and remove the upper brackets.

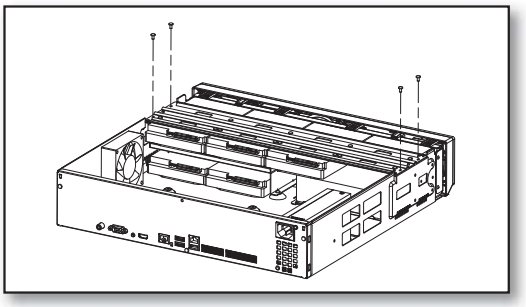


3. Install HDDs (x2) on the lower bracket and fix them with screws.

4. Install HDDs (x3) on the upper bracket and fix them with screws.

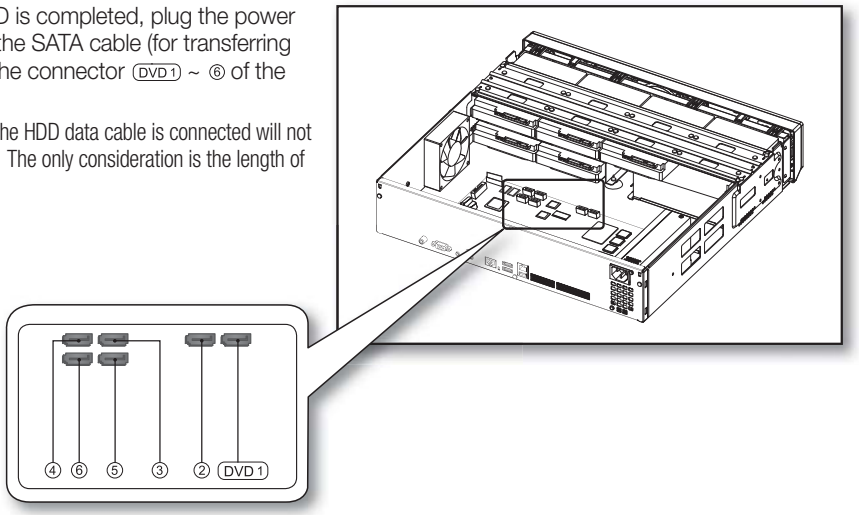


5. When the installation of additional HDDs is done, insert the lower and upper brackets into the NVR and fix them with the provided screws.

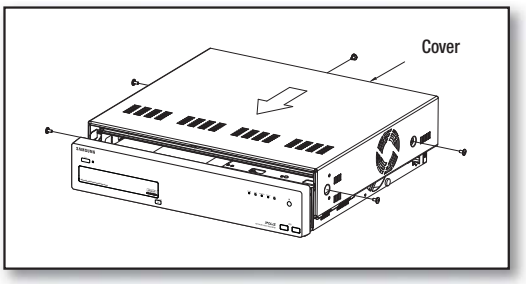


6. When adding a HDD is completed, plug the power cable and connect the SATA cable (for transferring the HDD signal) to the connector DVD 1 ~ ⑥ of the main board.

- Note that the order the HDD data cable is connected will not affect the operation. The only consideration is the length of each cable.

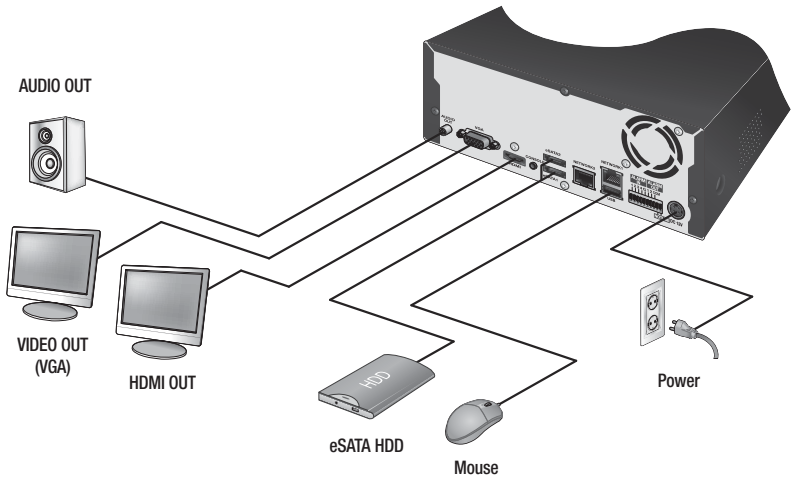


7. Check if the connectors are properly connected and there is no problem with wiring, and close the cover and fix it with screws.

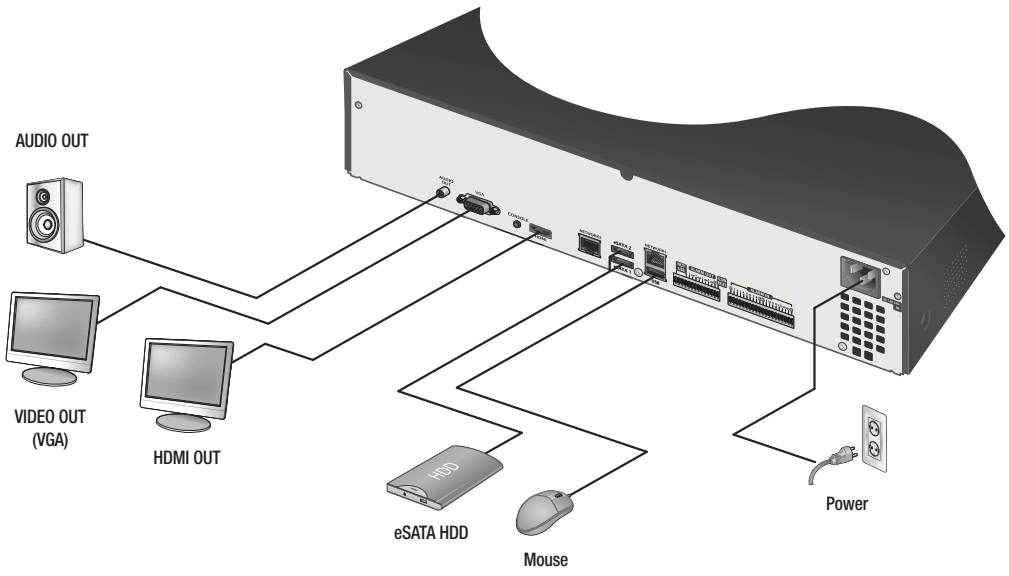


CONNECTING TO AN EXTERNAL DEVICE

SRN-470D



SRN-1670D



- Unrated or improper power source may cause damage to the system. Ensure that you use only the rated power source before pressing the POWER button.

connecting with other device

CONNECTING THE USB

1. By factory default, a USB port is provided for external connection.
2. You can connect a USB HDD, USB CD/DVD player, USB memory or mouse to the USB port.
3. If a USB HDD is connected to the system, recognition and settings are available in "**Menu Setup** > **Device** > **Storage Device**". (Page 56)
4. This product supports hot-plugging, which connects/removes the USB device during the system operation.

- If you use the USB device for Backup purposes, format it with FAT32 on PC if it is not formatted on the NVR.

CONNECTING EXTERNAL eSATA HDD

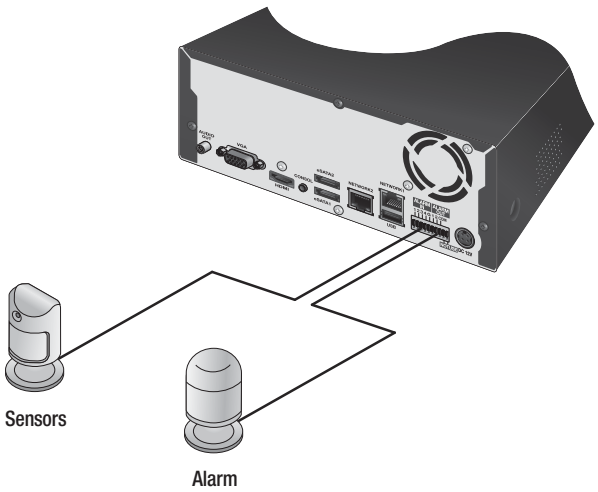
1. Two external eSATA ports are provided on the rear panel by factory default.
2. If connected to the system, the external eSATA HDD can be recognized and configured in "**Menu Setup** > **Device** > **Storage Device**".
3. The NVR supports Hot Plug function to allow connection and disconnection of eSATA HDD devices while the system is in use.

- Only one eSATA HDD can be connected to an external eSATA port.
- Use a cable shorter than 1 m for the external eSATA HDD connections.
- The power for an external eSATA storage will be supplied separately.
- The external eSATA port is recommanded with only Samsung Techwin-manufactured external HDD (SVS-5R).

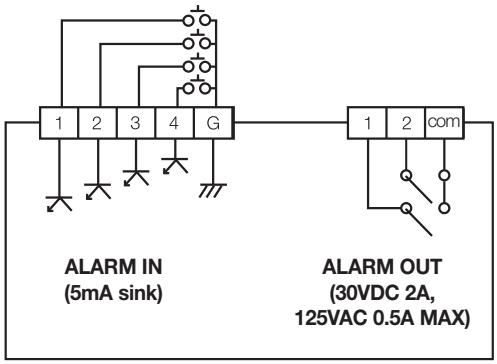
CONNECTING THE ALARM INPUT/OUTPUT

The Alarm In/Out port at the back is composed of the following.

SRN-470D

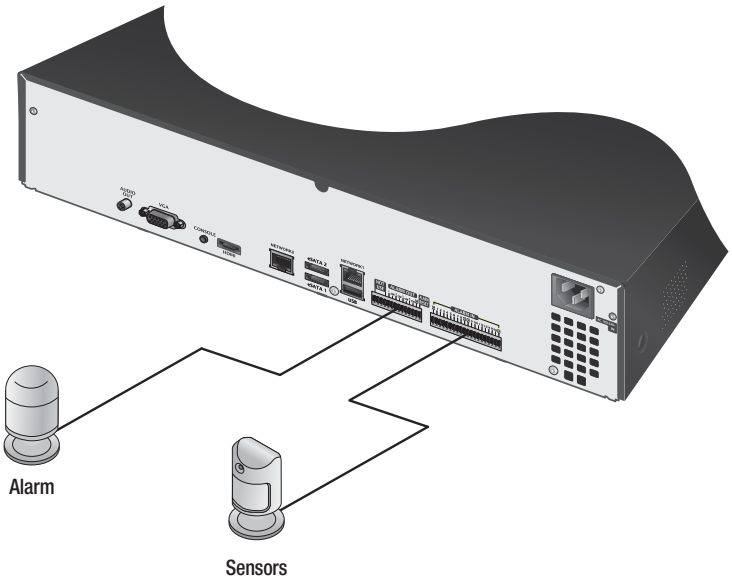


- ALARM IN 1 ~ 4 : Alarm Input Port
- ALARM OUT 1 ~ 2 : Alarm Output Port

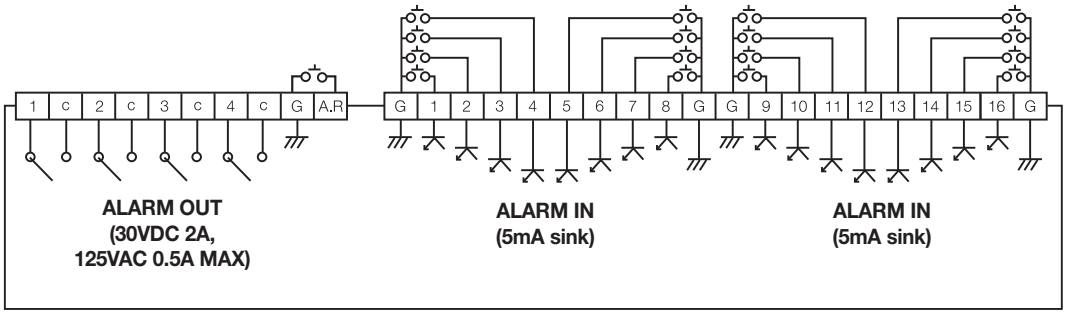


connecting with other device

SRN-1670D



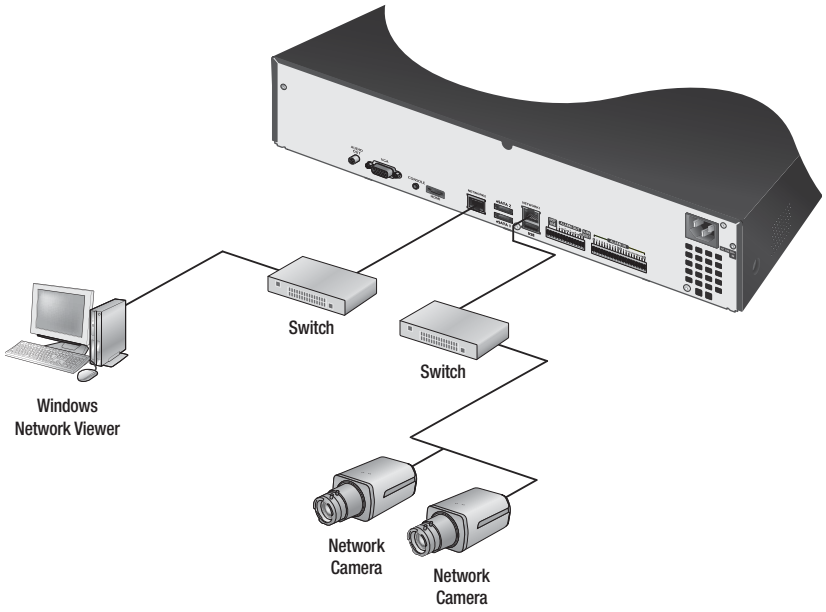
- ALARM IN 1 ~ 16 : Alarm Input Port
- ALARM RESET : On receiving an Alarm Reset signal, the system cancels the current Alarm Input and resumes sensing.
- ALARM OUT 1 ~ 4 : Alarm Output Port



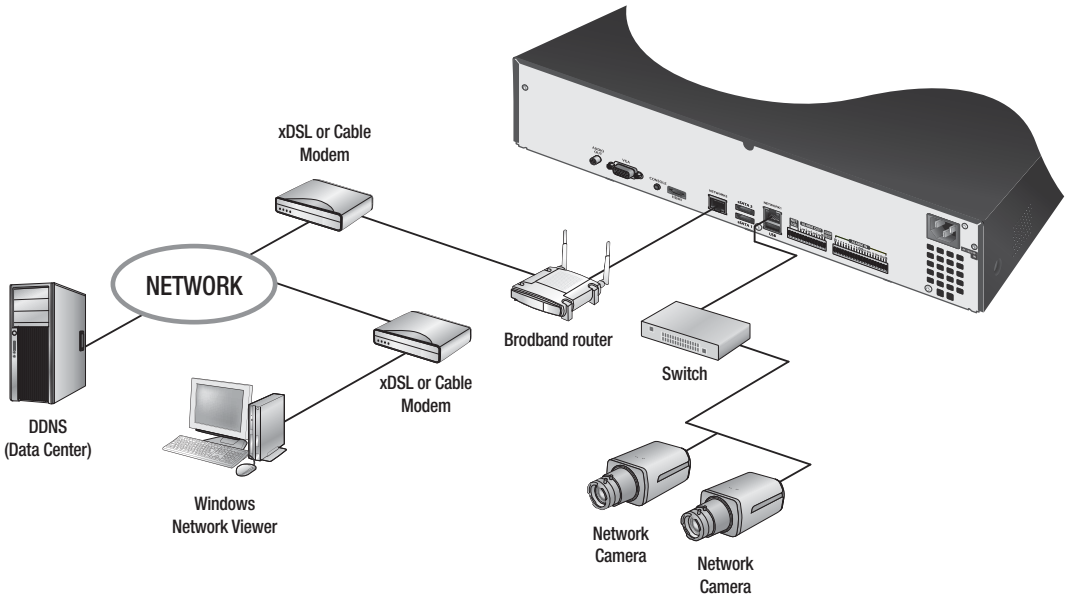
CONNECTING THE NETWORK

■ For more information about network connection, refer to "**Network Configuration**". (Page 68)

Network connection via Ethernet (10/100/1000BaseT)

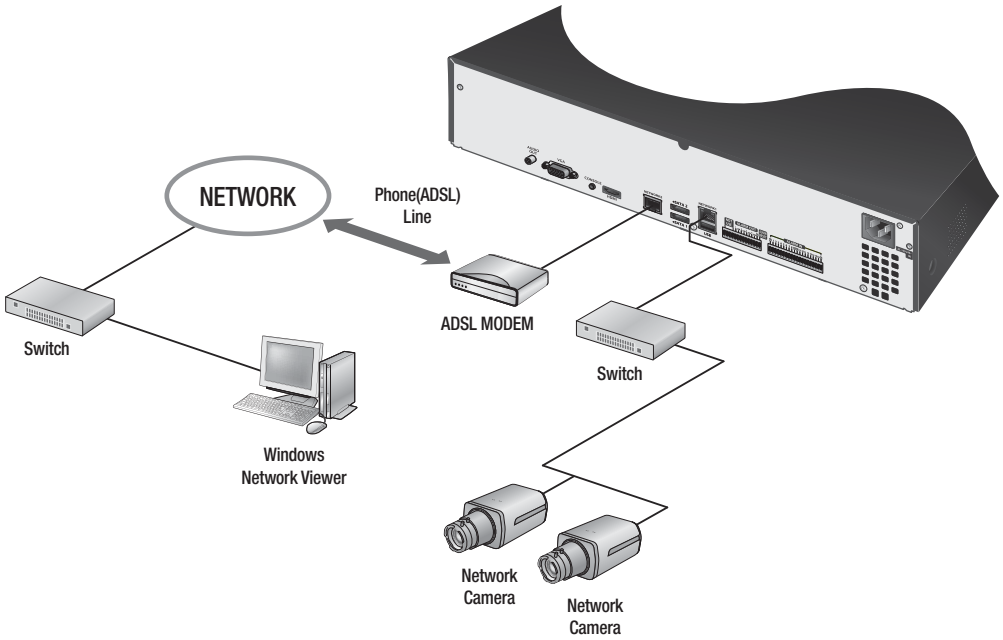


Network connection via router

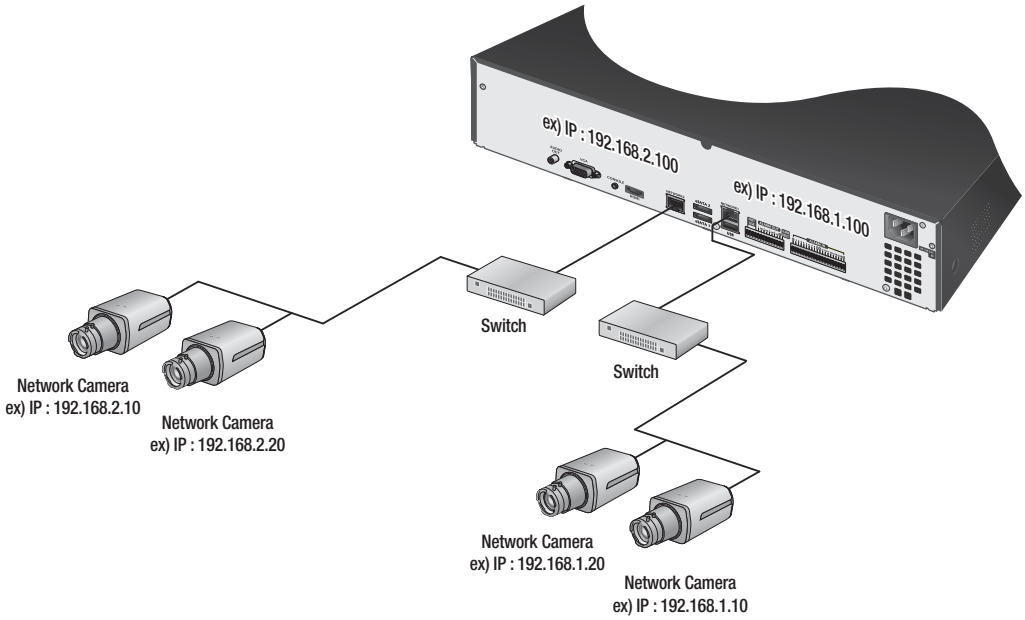


connecting with other device

Connecting to Internet through ADSL



Connecting the network camera

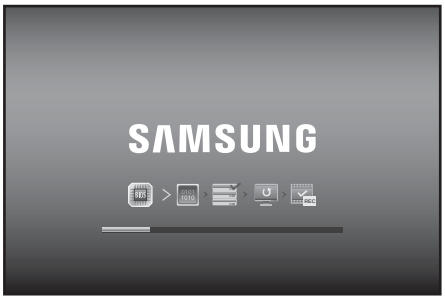


■ You can connect the camera or network viewer to either [**NETWORK1**] or [**NETWORK2**] to your preference.

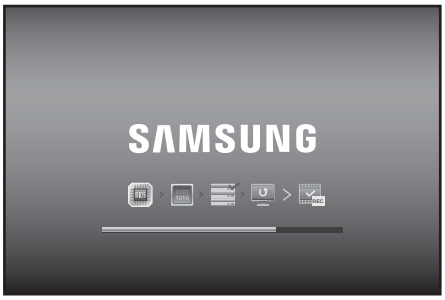
GETTING STARTED

Starting the system

1. Connect the power cable of the NVR to the wall outlet.
2. Press the Power button on the front panel.



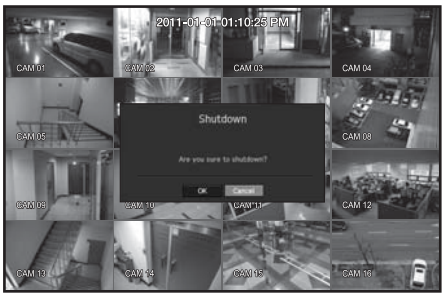
3. You will see the initialization screen.
   The initialization process will last about 2 minute.
   If a new HDD is installed, the initialization process may take longer.



4. The live screen appears with a beep.

Shutting Down the System

1. Press [**POWER**] on the remote control, or select <**Shutdown**> from the Live screen menu.
2. The "**Shutdown**" confirmation window appears.
3. Use the direction buttons on the remote control to move to <**OK**> and press [**ENTER**] or just click <**OK**>.
   The system will shut down.



- Only the user with the "**shutdown**" permission can shut down the system.
- For the permission management, refer to "**Permission Management** > **Setting Permissions**". (Page 46)

Login

If you want to access a specific NVR menu or restricted menu, you must obtain the applicable permissions to do so.

1. In Live mode, right-click any area, or press [**MENU**] on the remote control.
   You will see the context menu on the screen as shown.

2. Select <**Login**>.
   The login dialog appears.
   - The Login dialog will appear if you press any of the login-related menu buttons on the remote control.
   - The default ID is "**admin**"; the default password is "**4321**".

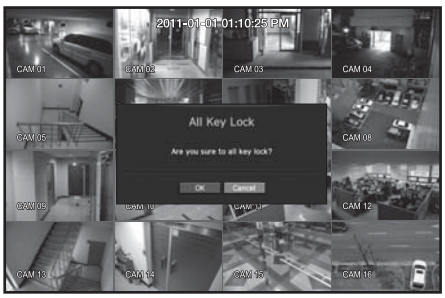
- The default password can be exposed to a hacking thread so it is recommended to change the password after installing the product. Note that the security and other related issues caused by the unchanged password shall be responsible for the user.

- For the restricted permission, refer to "**Permission Management** > **Setting Permissions**". (Page 46)

Locking All Buttons

You may choose to lock the entire buttons on the remote control or front panel to restrict access to the menus, or unlock the entire buttons.

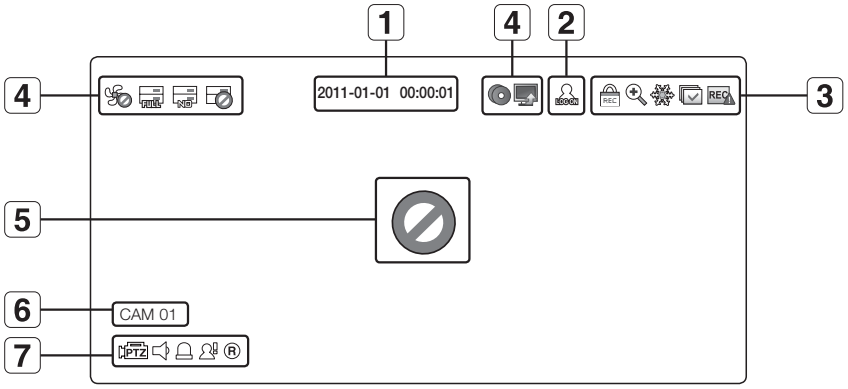
1. In Live mode, press buttons in the order of [**STOP**] ➞ [**FREEZE**] ➞ [**STOP**] ➞ [**FREEZE**] ➞ [**MENU**].
   All buttons will be locked.
2. In the lock condition, press any button to display a dialog where you are prompted to enter the password for unlocking the buttons.
   The button lock will be released if you enter the admin password.



LIVE SCREEN CONFIGURATION

Icons on the Live Screen

You can check the status or operation of the NVR with the icons on the live screen.



Name			Description
1	Current Date, Time		Displays the current time and date.
2	Login Information		When you are logged in, the "**LOG ON**" icon will be displayed.
3	Screen Mode		Displayed if the zoom function is activated.
			Displayed if you press the Pause button.
			Displayed in Auto Sequence mode where all channels are switched at the specific time interval.
			This icon is displayed if a user with restricted access to the Record button tries to make manual recording Only the user with the applicable permission can release (stop) the recording.
			This is displayed if some channels will be recorded only on key frames because the entire recording data size is over 64 Mbps. (Page 63)
4	System Operation		Displayed if there is a problem with the cooling fan.
			Displayed if the HDD is full and the NVR has an insufficient space to record.
			Displayed if no HDD is installed or the existing HDD should be replaced.
			Displayed if the HDD needs a technical examination.
			Displayed if a new firmware is found from the network.
			Displayed if backup is in progressing in Live mode.

Name			Description
5	Video Input Status		Displayed if no input is entered in the condition that the camera is set to <**ON**>.
		SAMSUNG	Displayed if no permission to live view is granted.
			Displayed in case of other errors.
			If the camera is set to <**OFF**> or <**Covert2**>, nothing will be displayed on the screen. If the camera is set to <**Covert1**>, the video will be displayed but the OSD menus will not be displayed.
		HD	SRN-1670D : In 16/9-split Live mode, if the camera video is created in a high definition, no video will be displayed but this icon. SRN-470D : If the resolution of a camera video exceeds 1600x1200, the channel of the video source will be shown as HD. ▪ For a proper video playback, the connected camera should support a low resolution profile as well. For this, you should add a low resolution profile, which you can perform in the setup page of the connected camera.
6	Camera Title / Channel		Display the camera title and channel number.
7	Camera Operation	PTZ	This icon is displayed for a channel that a PTZ-featuring camera is connected to.
			Displays AUDIO ON/MUTE. Not displayed in video mode if deactivated.
			If the sensor is set to <**ON**>, the input signal will be displayed on the screen of the connected channel.
			Displayed if a motion detected in the condition that the motion detection is set to <**ON**>.
		Ⓡ / Ⓔ / Ⓢ	Displays the current record mode from Record/Event/Schedule.

Error Information

- If the internal HDD is not connected, the "NO HDD"( ) message will appear; if there occurs a problem, you will see the "HDD FAIL"( ) message in the top left corner. In this case, make sure you contact the service center for assistance as this may cause a failure of recording, playback or backup.
- If the cooling fan does not work properly or has a problem, the <**Fan Information**> window will appear and the fan error icon ( ) will be displayed on the top left corner. In this case, check to see if the internal fan works.
  As a fan error can shorten the product life, make sure you contact the service center for assistance.

▪ If you see the fan error icon or No HDD, HDD FAIL icons on the screen, contact the service center for more details.

Live Screen Menu

Besides the function buttons on the remote control, right-click any area in the Live screen, or press [**MENU**] on the remote control to display the context menu where you can access a desired menu item.

The context menu differs depending on the state of Log in/out, split mode, and NVR operation status.

■ Depending on the user permissions, you may have limited access to menu items of Live View, Backup, Stop Recording, Search, PTZ, Remote Alarm Output, and Exit.

< Single Mode Menu >

< Split Mode Menu >

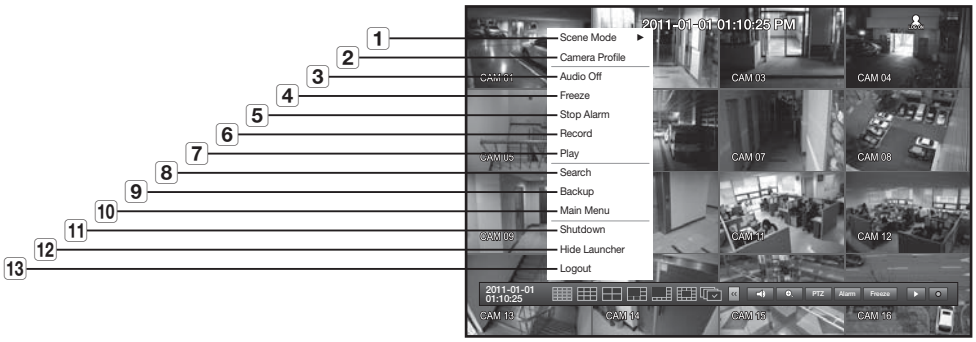
Single Mode Menu

The single mode menu is available only in Single Mode.
The context sensitive menu for the One Channel mode, in Split mode is different from that of the Single mode.

Menu		Description
1	Full Screen	Select and click a desired channel in Split mode to switch to the full screen of the selected channel.
2	PTZ Control	Accesses the PTZ Control menu. The PTZ menu will be active on the Live screen after you select a single channel. (Page 38)
3	ZOOM	You can enlarge the selected screen. (Page 35)

Split Mode Menu

In Live split mode, right-click to display this context menu as shown.
The context sensitive menu in split mode differs, depending on the login/logout status.



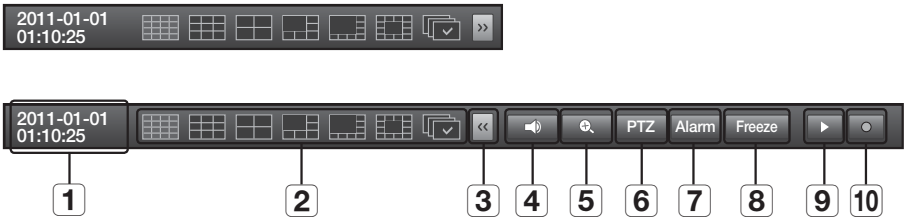
Menu		Description
1	Screen Mode	Select a screen mode for the Live screen. Refer to "**Live screen mode**". (Page 32)
2	Camera Profile	Display the profile information of the camera connected to each channel.
3	Audio On/Off	Turns ON/MUTE the sound of the selected channel. Refer to "**Audio ON/OFF**". (Page 36)
4	Freeze	Stop playing the video temporarily. Refer to "**Freeze**". (Page 36)
5	Stop Alarm	Stop the alarm output, deactivate the event icon and release the auto sequencing. Refer to "**Event Monitoring**". (Page 37)
6	Record/Stop	Starts/stops the standard recording.
7	Play	Refer to "**Search & Play** > **Play**". (Page 79)
8	Search	Refer to "**Search & Play** > **Search**". (Page 76)
9	Backup	Refer to "**Menu Setup** > **Backup**". (Page 67)
10	Main Menu	Access the main menu. Refer to Menu Setup. (Page 41)
11	Shutdown	The system shutdown dialog will appear.
12	Show/Hide Launcher	Shows or hides the launcher. Refer to "**View the Launcher Menu**". (Page 31)
13	Login/Logout	You can log in or out.

View the Launcher Menu

The Launcher menu appears on the bottom of the live screen.

1. Select <**Show Launcher**> in the context menu of the Live screen.
2. Move the cursor to the bottom and click a desired item in the Launcher menu.

- If no input is entered for 10 seconds, the menu will disappear.
- The Launcher menu can be accessed only by using the mouse.
- SRN-470D supports only: Single mode, 4-split mode, and Auto Sequence.



Menu		Description
1	Date/Time	Displays the current time and date. The indication of AM/PM is displayed if you set 12 hours for the time format in "**System** > **Date/Time/Language** > **Time**". (Page 41)
2	Screen Mode	Displays a list of split modes available in a bar type. The current screen mode will be displayed grey.
3	Menu Expansion Button	Click to display the hidden menu to the right.
4	Audio	Turns ON/OFF the sound of the selected channel.
5	Zoom	Enlarges the selected area. This is available only in Single Live mode.
6	PTZ	If the network camera connected to the selected channel supports the PTZ operations, this will run the PTZ control launcher. This is active only in Live single mode.
7	Alarm	Stops the alarm if it's activated.
8	Freeze	Freezes the Live screen temporarily.
9	Play	Enters Play mode if a file to play exist, and if not, enters Search mode.
10	Record	Start/End recording the Live screen.

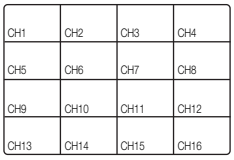
LIVE SCREEN MODE

This product can display up to 16 channels in up to 6-split mode with the auto sequence feature.

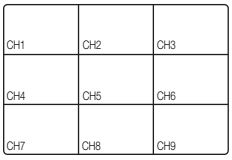
■ SRN-470D supports only: Single mode, 4-split mode, and Auto Sequence.

Switching the screen mode

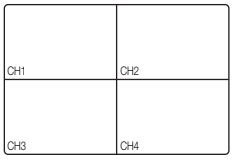
To change the split mode, select a split mode in the launcher menu, or select one in the context menu of the Live screen.
Press the [**MODE**] button on the remote control to switch the screen mode in the order suggested in the launcher menu.



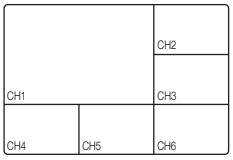
16-split mode



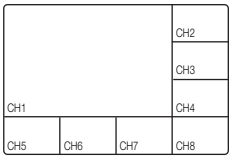
9-split mode



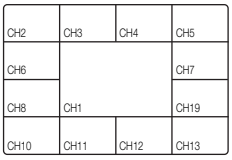
4-split mode



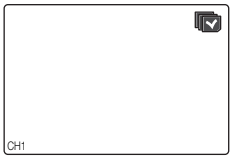
6-split mode



8-split mode



13-split mode

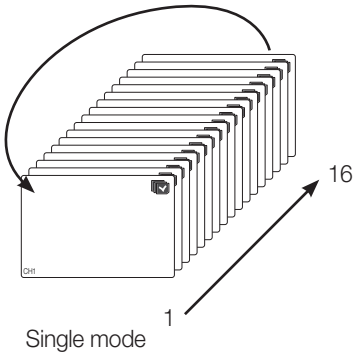


Auto Sequence

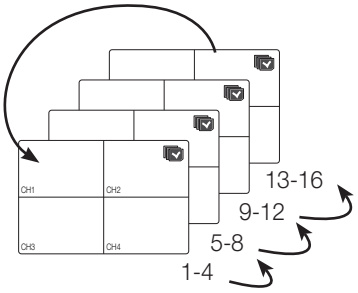
Switching the split mode

You can also play 16 Live channels in the sequence of: Single, 4-split and 9-split mode.

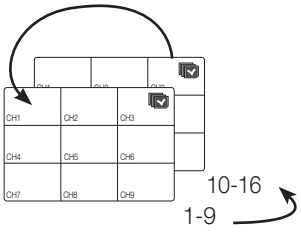
Auto Sequence



Single mode



4-split mode



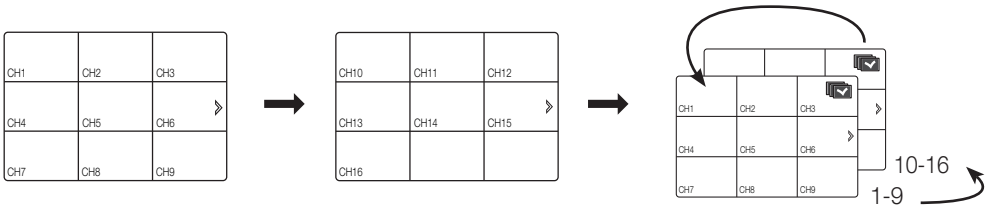
9-split mode

- In Single mode, If you have set <**Dwell Time**> in "**Setting the Device** > **Camera**", Auto Sequence will be conducted at the set interval. (Page 56)
- In a split mode, If you have set <**Multi CH SEQ Time**> in "**Setting the Device** > **Monitor**", Auto Sequence will be conducted at the set interval. (Page 59)
- When you switch the channel, the video may be delayed depending on the network condition.

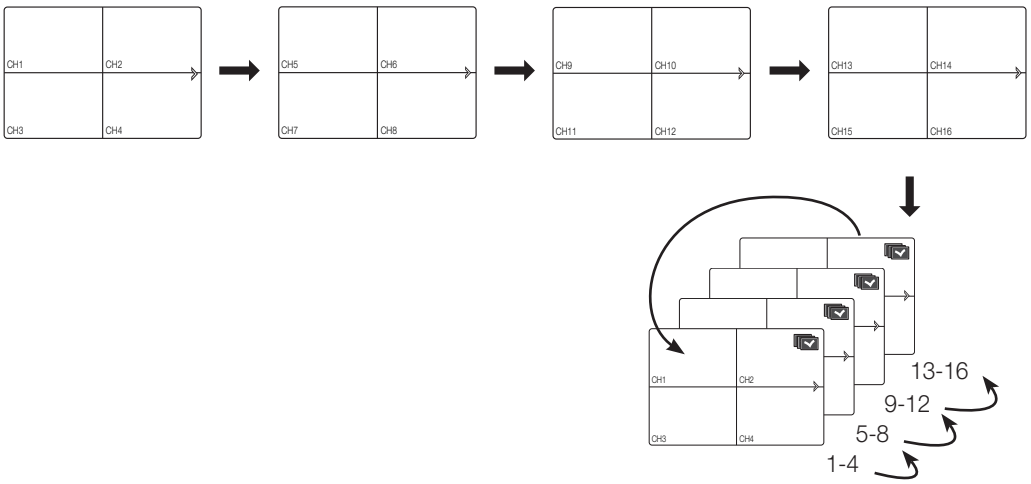
Manual Switching

Press the left/right button on the remote control, or click the arrow <◄/►> key to move to the next split mode.

• If pressing the right [►] button in 9-split mode :
9-split (CH 1~9) mode ➞ 9-split (CH 10~16) mode ➞ Auto Sequence



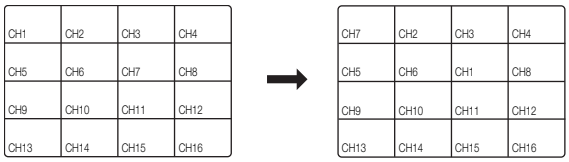
• If pressing the right [►] button in 4-split mode :
Channel (CH 1~4) ➞ Channel (CH 5~8) ➞ Channel (CH 9~12) ➞ Channel (CH 13~16) ➞ Auto Sequence



Channel Setting

You can display the channel in a desired area of a split screen.

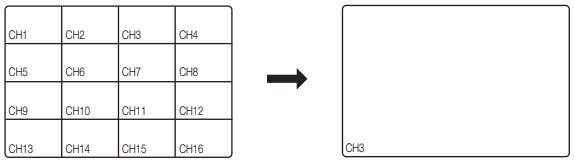
1. Place the cursor over the camera name of each channel to display the <▼> key to the right on the screen.
2. Click a camera name to display a channel list where you can select a different channel.
3. Select a desired channel and click it.
   The current channel will be switched to the selected one.
   Use the cursor to select a channel to move, and drag and drop it to a desired channel; this can also change the channel position.
   - Ex : if switching CH 1 to CH 7


CH1 CH2 CH3 CH4
CH5 CH6 CH7 CH8
CH9 CH10 CH11 CH12
CH13 CH14 CH15 CH16
CH7 CH2 CH3 CH4
CH5 CH6 CH1 CH8
CH9 CH10 CH11 CH12
CH13 CH14 CH15 CH16

Switching to Single Mode

When in split mode, select and double-click a desired channel to switch to its Single mode.
Press the number corresponding to a desired channel on the remote control to switch to its Single mode.
Refer to "**Remote Control** > **Using the numeric buttons**". (Page 12)

- Ex : If double-clicking CH 3 or pressing the number "3" on the remote control.



ZOOM

This is activated only in Live Single mode.
If you zoom in the screen in Single mode, the selected channel will be enlarged in the original size; if zooming in again, the selected area will be enlarged as twice as the original size.

1. Select <**ZOOM**> in the context menu of the Live screen.
   You can also press the [**ZOOM**] button on the remote control or click < > in the launcher menu.
   The channel will be enlarged in the original size with display of the zoom icon on the center of the screen.

   ▪ The original video will be enlarged only if the original size is larger than the monitor resolution.

2. Use the direction buttons (▲▼◄►) on the remote control or use the drag-and-drop method to specify the area that you want to enlarge.
3. Press [**ENTER**] or double-click to enlarge the selected area twice.
   ▪ You can use the drag-and-drop method on the enlarged screen, or use the direction buttons (▲▼◄►) on the remote control to move the enlarged area.
4. Right-click to display the context menu and select <**Zoom Out**>.
   Press the [**ZOOM**] button on the remote control or click < > in the launcher menu to release the zoom mode.

   ▪ In zoom mode, you cannot freeze the video.

<Normal>

<Original size>

<Enlarged twice>

AUDIO ON/OFF

You can turn the sound on/off corresponding to the channel in Live mode.

AUDIO ON/OFF in Single mode

Click the sound icon (🔊) on the screen or press [**AUDIO**] on the remote control to turn on/off the sound.

- If you have configured the audio output settings properly but the audio or voice is not output, check if the connected network camera supports the sound signal and if you have configured the sound settings as appropriate.
  The sound icon can be displayed if the sound signal fails to output from noise.
- Only the channel where <**AUDIO**> is set to <**ON**> in "**Setting the Device** > **Camera**" displays the audio icon (🔊) in Live mode that you can use to turn the sound on/off.

FREEZE

This is available only in Live mode, this pauses playing the Live image temporarily.

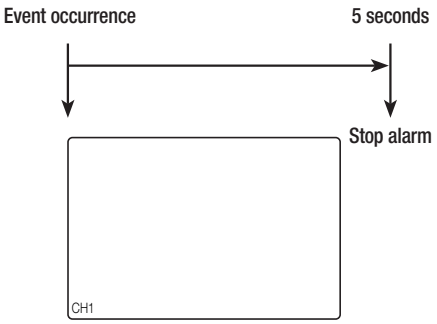
1. Press the [**FREEZE**] button on the remote control, or click < Freeze >in the launcher menu.
   The playback of the image is stopped temporarily.
2. Press the [**FREEZE**] button again, or click < Freeze >.
   This will release the freeze.

- In freeze mode, you cannot zoom in the video.

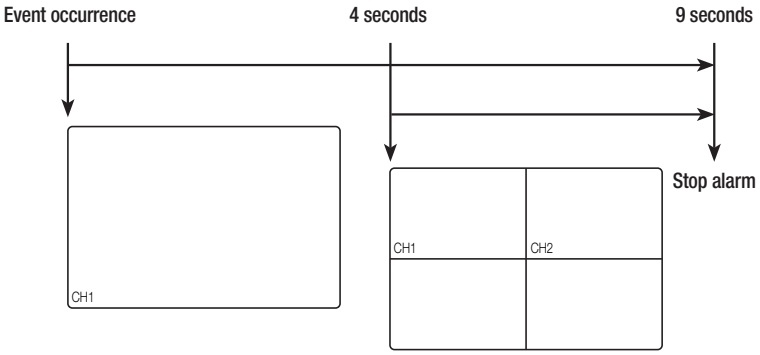
EVENT MONITORING

This will display the channel in sync with a specific event (Sensor/Motion/Video Loss) if it occurs.
In "**Monitor** > **Event Display**", set the event monitoring to ON/OFF and specify the event display time. (Page 59)

- If multiple events occur simultaneously, the screen will switch to a split mode.
  - 2~4 events : 4-split mode
  - 5~9 events : 9-split mode
  - 10~16 events : 16-split mode
- If the second event occurs within the set time of <**Event Display**>, the first event will last until the second one is terminated.
  - Ex : If you set <**Event Display**> to 5 seconds, and only one event occurs in CH 1.



  - Ex : If you set <**Event Display**> to 5 seconds, and the second event occurs in CH 2 within the set time after the first event occurred in CH 1.



- Press the [**ALARM**] button to reset the alarm settings and to release the event mode.
- If an alarm is output with the pre-event and post-event times specified together with the event recording settings, the event recording will perform according to the specified recording type (pre event or post event).

- The video may be delayed depending on the network condition.
- The event output can be delayed as the transfer of the alarm event from the network camera takes time.

PTZ CONTROL

With this NVR, you can configure the settings of a PTZ camera as well as commercial cameras in the market to your preference.

PTZ device

This is active only if a channel that a PTZ camera is connected to is selected.

Getting started with PTZ operations

The PTZ camera will be activated only if the channel of the PTZ camera is selected, which can be performed in the following way:

- Using remote control buttons : Press the [**PTZ**] button on the remote control.
- Using the launcher menu : Click < PTZ > from the launcher menu of the Live screen.
- Using the Live screen menu : Select **<PTZ Control>** in the context menu of the Live screen.
- Using the icons on the Live screen : Simply click the PTZ <PTZ> icon on the Live screen.

- This is available only if a PTZ camera is connected and the PTZ icon is displayed on the screen.
- Even if the connected network camera does not support the PTZ operations, you can configure the PTZ control settings (if possible) by installing the PTZ driver (physical device).
- This is available only with Samsung Techwin-manufactured PTZ network camera.

Using the PTZ camera

You can use a single PTZ camera to perform the Pan, Tilt and Zoom operations to monitor multiple places, and configure the custom settings of the presets in a desired mode.

1. Open the <**PTZ Control**> menu.
The PTZ <PTZ> icon in the left bottom of the screen will turn yellow, indicating that the system accesses "**PTZ Control**" mode. You will see the "**PTZ Control**" launcher menu.

▪ The PTZ working (active) mark can be active even if the PTZ operation is not available in normal mode. So ensure that you have completed the PTZ settings before proceeding.

2. Use the PTZ wheel in the launcher menu to adjust the monitoring area, or use the direction buttons (▲▼◄►).

- PTZ Wheel: Click a near area from the center to move the camera lens slowly; clicking a far area will move it fast.
  - ▪ If clicking and holding the mouse in the left will turn the camera counterclockwise; if clicking and holding the mouse in the right will move the camera lens clockwise.
- Zoom : Activate the Zoom operation of the PTZ camera.
- Iris : Adjust the amount of light incoming to the camera.
- Focus : You can adjust the focus manually.
- Swing : Swing is a monitoring function that moves between two preset points and enables you to trace the motion.
- Group : The group function enables you to group various presets before calling them in sequence.
- Trace : Tracking remembers the trace of movements that you instructed and reproduces it for your reference.
  - ▪ Some cameras may differ in the menu title and operation with regard to Swing, Group and Trace.

▪ Even if the network camera supports the PTZ operations by default, the PTZ control can be enabled only if the applicable menu is active in the launcher menu.

Preset

Preset is a specific position remembered by the PTZ camera. You can use the Preset function to define up to 20 presets for a single PTZ camera.

❖ To add a preset

1. Check the preset checkbox.
2. Select <**Add**>.
   The virtual keyboard will appear on the screen. Use it to provide the preset name.
   - Refer to "**Using Virtual Keyboard**". (Page 43)

- Rename : You can change the preset settings to your preference.
- Delete : Delete a selected preset.
- Delete All : Delete all the existing preset settings.

- You can add up to 20 presets, which is the max count supported by the NVR.
- If you replace a camera that saves your preset settings with a different one, you must configure the preset settings again.

3. Select <**OK**>.
   The preset setting will be saved in the provided name.

❖ To change or delete a registered preset

1. Check the preset checkbox and select a preset to change or delete.
2. Press <**Rename**> or <**Delete**> as needed.

- Delete All: Delete all the existing preset settings.

- If you delete the entire presets, the default presets specified in the network camera can be deleted accordingly.

3. Provide a new name and press <**OK**>.

Menu Setup

You can setup the system properties, devices, and options for recording, event, backup and network.

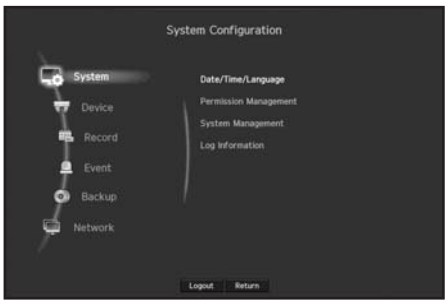
SYSTEM SETUP

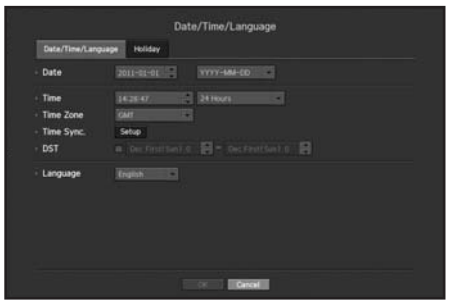
You can setup Date/Time/Language, Permission, System Properties and Log.

Date/Time/Language

You can check and setup the current Date/Time and time related properties, as well as the language used for the interface on the screen.

[**MENU**] ⇨ <**System Configuration**> ⇨ ► ⇨ <**Date/Time/Language**> ⇨ [**ENTER**] ⇨ ▲▼◄► ⇨ [**ENTER**]





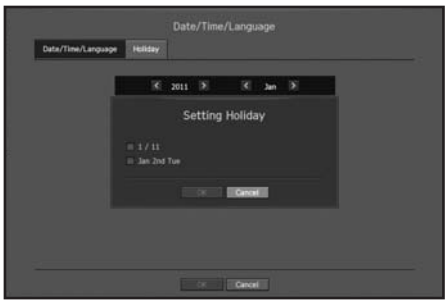
- Date : Sets the date that will appear on the screen.
  You can select the date format.
- Time : Sets the time and its format that will appear on the screen.
- Time Zone : Sets the time zone of your area based on the Greenwich Mean Time (GMT).
  - GMT (Greenwich Mean Time) is standard World Time and the basis of world time zone.
- Time Sync. : Specify the use of synchronization with the time server. If you select to use the <**Time Server**>, the current time will be synchronized on a regular basis by the server defined as <**Time Server**>.
  If this is the case, you cannot change the time setting manually.
  - Synchronization : Specify the use of synchronization with the time server.
  - Time Server : Enter an IP or URL address of the time server.
  - Last Sync Time : Displays the most recent synchronization time from the selected time server.
  - Activate as Server : Set to <**Use**> to allow the NVR to act as a Time Server for other NVRs.
- DST : Set up Daylight Saving Time with its period to make the time earlier than the GMT of its time zone by 1 hour during the set period.
- Language : Select your language. Sets the language for the interface.
  English, French, German, Spanish, Italian, Chinese, Russian, Korean, Polish, Japanese, Dutch, Portuguese, Turkish, Czech, Danish, Swedish, Thai, Romanian, Serbian, Croatian, Hungarian and Greek are available.

- You can also use numeric buttons on the remote control to enter values for Date, Time and other numeric fields.

Setting Holiday

You can set specific dates to Holidays according to your preferences.
Holidays are applied to <**Recording Schedule**> and <**Alarm Out Schedule**> too.

[**MENU**] ⇨ <**System Configuration**> ⇨ ► ⇨ <**Date/Time/Language**> ⇨ [**ENTER**] ⇨ ◄► ⇨ <**Holiday**> ⇨ ▲▼◄► ⇨ [**ENTER**]



- Ex : Select January 11th and check on <**1/11**> only to make every January 11th a holiday. Check both on <**1/11**> and <**Jan 2nd Tue**> to make every January 11th and 2nd Monday of January holidays.

To use the calendar

Using the mouse may help make setup easier.

1. Select year and month.
   Select the left/right < ❮ ❯ > key on the left/right side of year/month and press [**ENTER**] button to adjust by 1 year/month.
2. Use direction buttons to select a date and press [**ENTER**] button.
   - A date with recorded data to be searched will appear in yellow in the System Log, Event Log, Time Search and Event Search.

Permission Management

You can set permissions of each user over the NVR's specific function and settings.

Setting the Administrator

You can set and change Administrator's ID and password.
The administrator can use and set all menu items and functions.

[MENU] ⇨ <System Configuration> ⇨ ►▼ ⇨ <Permission Management> ⇨ [ENTER] ⇨ <Admin> ⇨ ▲▼◄► ⇨ [ENTER]

- ID : Change the admin ID.
- Password : Provide a new password.

- The default ID is "**admin**"; the default password is "**4321**".
- The default password can be exposed to a hacking thread so it is recommended to change the password after installing the product.
  Note that the security and other related issues caused by the unchanged password shall be responsible for the user.

Using Virtual Keyboard

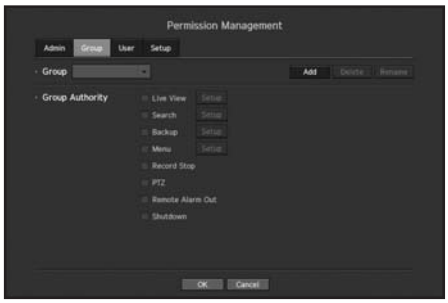
1. For alphanumeric inputs, the virtual keyboard window appears.
2. Use direction buttons (▲▼◄►) to move to a desired character, and press the [**ENTER**] button.
3. In the upper text input box of the virtual keyboard, there displays a list of candidate words containing the selected character.
4. Select a word from the list, or use the keyboard to enter the whole word.
   - If there are many of candidate words, use < < > > buttons to move between them forward and backward.

5. Select <**OK**>.
   Entered word is applied.
   - For upper case letters, use <**Caps Lock**> button.
   - For special characters, use <**Shift**> button.
   - Using the virtual keyboard is the same to a normal keyboard use in your region.
   - You can enter the ID with case-insensitive alphanumeric characters only.
   - For the password, use alphabets and special characters excluding < \ > and <">.
   - You can use number buttons on the remote control.

Setting the Group

You can create user groups and setup permissions for those user groups.
You can register a user for each group in <**User**>.

[**MENU**] ⇨ <**System Configuration**> ⇨ ►▼ ⇨ <**Permission Management**> ⇨ [**ENTER**] ⇨ ◄► ⇨ <**Group**> ⇨ ▲▼◄► ⇨ [**ENTER**]



- Add, Delete, Rename : You can add, delete, rename a group or modify the permissions given to the group. The virtual keyboard appears when <**Add**> or <**Rename**> was selected. You can add up to 10 groups.
  - Add : Provide a name for the group that you want to add. You can add up to 10 groups. When you first start the NVR, the admin is the only user account so any other button than Add will be deactivated.
  - Delete : Deletes a user group that is already registered. Selecting Delete will delete all user accounts belonging to that group.
  - Rename : Renames a group that is already registered. Select <**Rename**> to display the virtual keyboard.
  - ■ For entering a group name, refer to "**Using Virtual Keyboard**". (Page 43)
- Group Authority : Sets permissions to access menu items of each group. Users of a group can access checked functions.

To set the group authority

You can set the permissions of the group users to access the menu according to the channel.

1. Select a menu to which the group permission is assigned.
   The menu where the group permission is assigned will be displayed in the Live menu when a group user logs in.

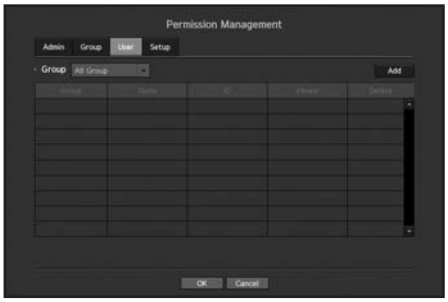
- Live View : You can set the permission to access the Live screen according to the channel.
- Search : You can set the permission to access the Search menu according to the channel.
- Backup : You can set the permission to access the Backup menu according to the channel.
- Menu : You can set menus accessible with a specific permission. Group users can access the permitted menus only. Select a menu to display the Menu Permission screen.
- Record Stop, PTZ, Remote Alarm Out, Shutdown : Select an item so that the item will be added to the permissions.

2. Select <**OK**>.
   Select and assign a group user so that the user can access the specified menu.

Setting the users

You can add a user and edit information of a registered user.

[MENU] ⇨ <System Configuration> ⇨ ►▼ ⇨ <Permission Management> ⇨ [ENTER] ⇨ ◄► ⇨ <User> ⇨ ▲▼◄► ⇨ [ENTER]



To register a user

1. Select a user group.
   You must first register a group where the user will belong to so that user can be registered. Register a group in the <**Group**> item.
2. Provide the user name, ID and password, and specify the use of the viewer.
   If you set <**Viewer**> to On, you will be granted permission to use both web viewer and network viewer.
3. Click <**OK**>.
   Information of the registered users will be listed.

To edit or delete the user information

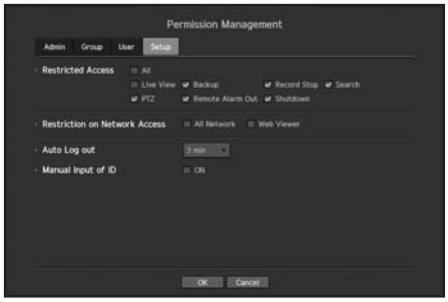
1. Select any item of the user information in the list.
2. Provide new information and click <**OK**>.
3. To delete an item, select an item and press the Delete button.
4. When the Delete confirmation dialog appears, click <**OK**>.

Menu Setup

Setting Permissions

You can set restricted access for all general users.
Items with restrictions will require logging in for use.

[**MENU**] ⇨ <**System Configuration**> ⇨ ►▼ ⇨ <**Permission Management**> ⇨ [**ENTER**] ⇨ ◄► ⇨ <**Setup**> ⇨ ▲▼◄► ⇨ [**ENTER**]

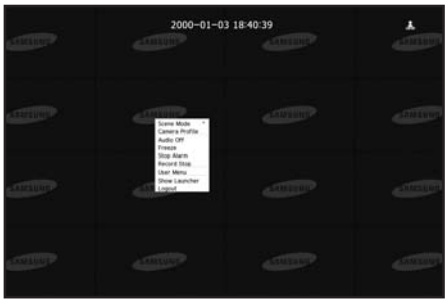


- Restricted Access : All menu items allowed for a user can be set with restricted access.
  - Checked (☑) : Restricted
  - Not checked (■) : Accessible
  - If it is not checked (■) in <**Restricted Access**>, any user can access the item no matter what the <**Group Authority**> setting.
  - If it is checked (☑) in <**Restricted Access**>, a user can access the item only if the user has permission in <**Group Authority**> setting.
- Restriction on Network Access : Restricts remote access from a <**Restricted Access**> network.
  - All Network : Restricts all access instances via Network Viewer and Web Viewer.
  - Web Viewer : Restricts access via the Web Viewer.
- Auto Log out : A user will be automatically logged out if there is no operation on NVR for over set period of time.
- Manual Input of ID : Prompts you to enter the user ID manually for the login process.
  - Checked (☑) : Provide the user ID manually. Encloses the registered user IDs with the [*] symbols.

If the user has restricted access

If a new group is restricted to access the entire menus, the users belonging to the group can access only the basic menus and can change only their respective password.

If all permissions are restricted, you will see only some menu items accessible in the Live screen menu.



To change the user password

If you log in with the user account of a group with restricted access, you just can change your own password.

1. Provide the login information.
2. Select <**User Menu**>.
   The Permission Management screen appears.
3. Select <**Permission Management**>.
   The Password dialog shall appear.
4. Provide a new password.
5. Select <**OK**>.
   The old password will be changed to a new one.

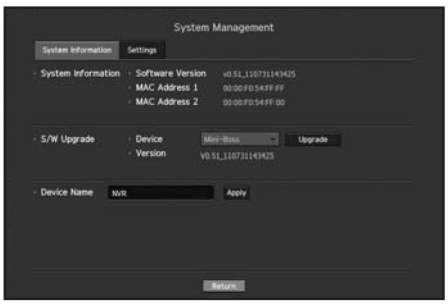
System Management

You can check the system version, update to a newer version, as well as data backup and initialization.

Checking the System Information

You can check the current software version and MAC address before proceeding with the upgrade.

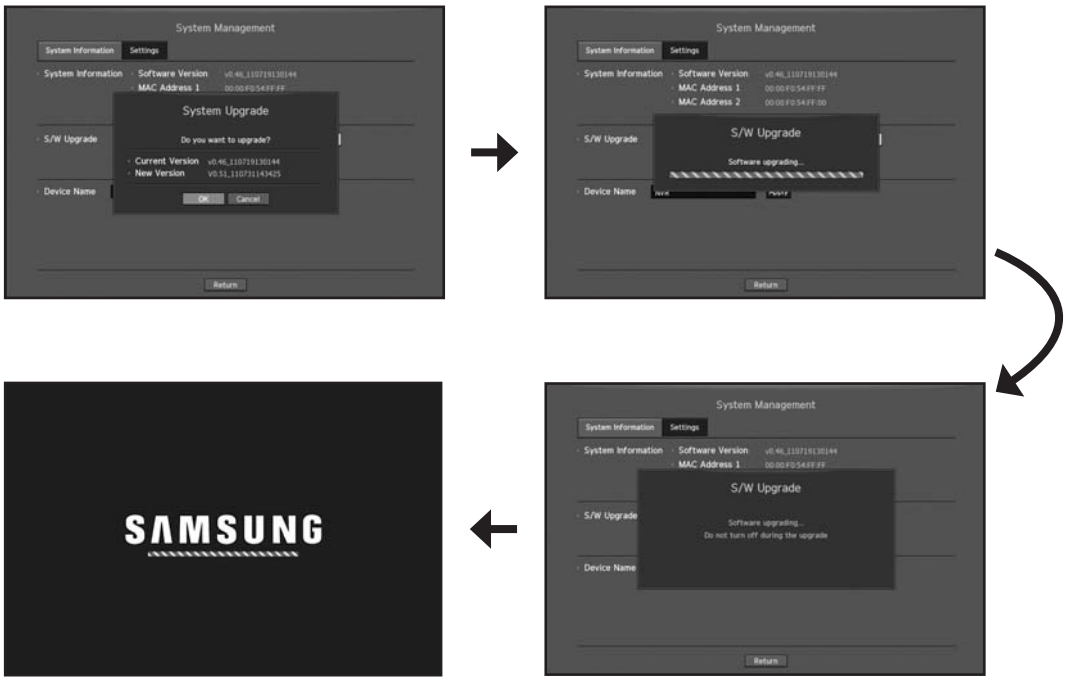
[**MENU**] ⇨ <**System Configuration**> ⇨ ►▼ ⇨ <**System Management**> ⇨ [**ENTER**]



- System Information : Shows the current system's information.
  The values can not be changed by a user.
- S/W Upgrade : Updates the NVR's software up to date.
- Device Name : Displayed if the network viewer is connected to NVR.

Menu Setup

To upgrade the current software version



1. Connect a device storing the software to be updated.
   - It may take about 10 seconds to recognize the device.
   - Upgradeable devices include USB memory, CD/DVD and network device.
   - To update the network, the current NVR should have been connected to the network. Upgrade via the proxy server may not be enabled due to the restricted access.
2. Select <**System Management**> from <**System**> window.
3. Select <**System Information**>.
4. When the recognized device appears, select <**Upgrade**>.
   - The <**Upgrade**> button will be activated only if the current <**Software Version**> of the <**System Information**> is same to or older than that of <**S/W Upgrade**>.
5. Press <**OK**> in the "**System Upgrade**" window.
   - While updating, it shows the progress.
6. When the updating is done, it automatically restarts.
   Do not turn the power off until it finishes restarting.

- If "**Upgrade Failed**" appears, retry from the step 4.
  When you experience continued failure, consult the service center for assistance.

Settings

You can copy and import the NVR settings by using a storage media.

[**MENU**] ⇨ <**System Configuration**> ⇨ ►▼ ⇨ <**System Management**> ⇨ ▼► ⇨ <**Settings**> ⇨ ▲▼◄► ⇨ [**ENTER**]

- Storage Device : Shows the connected storage device.
- Export : Exports NVR settings to the connected storage device.
  Check the checkbox of an item(s) that you want to export.
  Only the other items than the selected one will be saved to the storage media.
- Import : Imports NVR settings from the storage device and applies to the NVR.
  Check the checkbox of an item(s) that you want to import.
  Only the other items than the selected one will be applied to the NVR.
- Load Factory Default : Restore the factory default settings of NVR.
  Check the checkbox of an item(s) that you want to reset. Then, only the other items than the selected one will return to the factory default.
  If <**Default**> is selected, a confirmation dialog for "**Load Factory Default**" prompts.
  Press <**OK**> to initialize the system to the factory default.

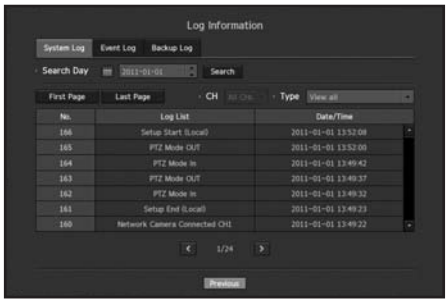
Log Information

You can browse logs on the system and events.

Checking the system log

System Log shows log and timestamp on every system start up, system shutdown, and changes on system settings.

[**MENU**] ⇨ <**System Configuration**> ⇨ ►▼ ⇨ <**Log Information**> ⇨ [**ENTER**] ⇨ <**System Log**> ⇨ ▲▼◄►

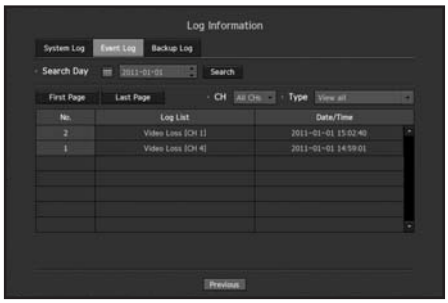


- Search Day : Click the Calendar icon to display the calendar window, or use the direction buttons to specify the search period of the system log.
  - For using the calendar, refer to "**To use the calendar**". (Page 42)
- Search : Specify the date and press this button to display the search result in the log list.
- Type : When there are too many logs, you can display logs of the desired format by selecting the type.

Checking the event log

Event log shows recorded events on alarms, motion detections and video loss.
It also shows the log and its timestamp.

[**MENU**] ⇨ <**System Configuration**> ⇨ ►▼ ⇨ <**Log Information**> ⇨ [**ENTER**] ⇨ ▼►⇨ <**Event Log**> ⇨ ▲▼◄►



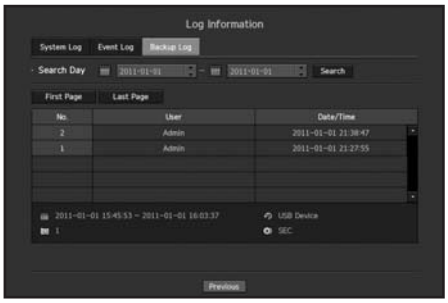
- Search Day : Click the Calendar icon to display the calendar window, or use the direction buttons to specify the search period of the system log.
  - For using the calendar, refer to "**To use the calendar**". (Page 42)

- Search : Specify the date and press this button to display the search result in the log list.
- Type : When there are too many logs, you can display logs of the desired format by selecting the type.

Checking the backup log

You can find out who backed up and the details (backup time, channel, device to use, file format, etc.).

[MENU] ⇨ <System Configuration> ⇨ ►▼ ⇨ <Log Information> ⇨ [ENTER] ⇨ ▼►⇨ <Backup Log> ⇨ ▲▼◄►



- Search Day : Click the Calendar icon to display the calendar window, or use the direction buttons to specify the search period of the system log.
  - For using the calendar, refer to "**To use the calendar**". (Page 42)
- Search : Specify the date and press this button to display the search result in the log list.

Menu Setup

SETTING THE DEVICE

You can setup Camera, Storage Device, Remote Device and Monitor.

Camera

To register a camera

You can register a network camera for each channel and make connection between.

[**MENU**] ⇨ ▲▼ ⇨ <**Device**> ⇨ ► ⇨ <**Camera**> ⇨ [**ENTER**] ⇨ ▲▼◄► ⇨ [**ENTER**]

- Protocol : Show the protocol information of a registered network camera.
- Model : Show the camera model name.
- IP : Display the IP address of a network camera.
- Connection : Display the connection status.
- Register : This is the default registration button for a network camera.
  It will be displayed <**Auto**> before registration, and will be changed to <**Delete**> after registration.

To auto-search for and register a network camera

1. Select <**Auto**> in the <**Register**> item and press [**ENTER**].
2. The "**Add Camera Automatically**" window appears and NVR starts searching for connected network cameras.
   - An already registered camera will be marked in blue in the list.
3. Check the checkbox next to a network camera that you want to connect to.
   - You can select all of the network cameras in the list and provide <**ID**> and <**Password**> all at once.

- Registering camera with user account other than admin may restrict camera function.

4. Provide the <**ID**> and <**Password**> for the selected network camera.
5. Press <**Register**> to register the selected camera.

To manually search for and register a network camera

1. Press <**Add Manually**> in the bottom left corner of the "**Add Camera Automatically**" window.
2. The Manual Search window appears.
3. Select a protocol.
   The input items may differ depending on the selected protocol..

• SAMSUNG : Comply with the internal network protocols adopted by Samsung Techwin.
• RTSP : Comply with RFC 2326, one of "Real Time Streaming Protocol (RTSP)" for real-time streaming.

4. If you select the <**SAMSUNG**> protocol, check options as necessary.

• Model : Select a camera model.
  - SVNP : Indicate a network camera that complies with SVNP protocols of Samsung Techwin. If you want to connect a camera that is not displayed in the camera list, select a SVNP model name.
    ▪ However, you must select the correct model name of the camera, if it's in the list. Some of obsolete camera models may not be supported.

• Address type: Select an address type of the camera.
  - Static : Used to provide the IP address of the camera manually.
  - iPOLiS DDNS : This is available only if the camera is registered with the iPOLiS DDNS(www.samsungipolis.com) server. Provide the registered domain for DDNS ID.
    ▪ Ex) http://www.samsungipolis.com/snb5000 -> provide "snb5000" for iPOLiS DDNS
  - MAC (Samsung) : Available if the camera supports the MAC Address-based DDNS.
  - URL : Used for URL address input.

▪ Refer to the user manual of the connected camera and check the DDNS specification that is supported by the camera.

• IP : Provide the IP address of the camera.
• Device Port : Provide the device port of the camera.
• HTTP Port : Provide the HTTP port of the camera.
• ID : Provide the ID of the camera that you want to register.

5. If you select <**RTSP**> for the protocol, check options as necessary.

- RTSP URL : For more information about the RTSP address, refer to the manual of each applicable network camera.
- ID : Enter the ID with which you connect to RTSP.
- Password : Enter the password for connecting to RTSP protocols.
- Mode : Select a mode that is supported by the network camera in RTSP connection mode.
  - TCP : The connection type with the network camera will switch to "RTP over TCP".
  - UDP : The connection type with the network camera will switch to "RTP over UDP".
  - HTTP : The connection type with the network camera will switch to "RTP over TCP (HTTP)".

▪ For RTSP connection, up to 5 cameras of 2M or 3M resolution can be supported.

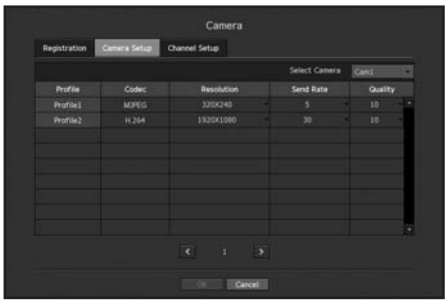
If you want to check the error details of camera registration

If you failed to register a camera, the reason for the failure will be displayed.

- **Connection failed due to unknown error.** : This message appears if the camera has failed to be registered due to unknown connection status.
- **Connected successfully.** : This message appears if the camera is connected successfully.
- **Incorrect model information. Provide the correct model information.** : This message appears if the model information provided for registering the camera is incorrect.
- **Authentication has failed** : This message appears if the ID or password provided for registering the camera is incorrect.
- **Connection has failed due to excessive concurrent users.** : This message appears if the concurrent user count exceeds the upper limit.
- **Connection has failed due to incorrect HTTP port information.** : This message appears if the HTTP port number of the camera is invalid.
- **Connection has failed. Unknown connection status.** : This message appears if the camera has failed to be connected due to a unknown error.
- **Custom Model** : If you set the camera model to <**Standard**> when registering it, the system will retrieve the name directly from the camera. However, if registration has failed, you can enter the camera name manually.

Camera Setting

You can change the video settings of a registered network camera for each channel.



- Profile : Show a video profile for the connected camera.
- Codec : Show the codec information for the selected profile.
- Resolution : You can change the resolution of the selected profile.
- Send Rate : You can change the baud rate of the selected profile.
- Quality : You can change the video quality of the selected profile.

- If you change the settings of a specific profile for each model, the effective range of the baud rate may be changed accordingly.
  Ex) if you set the baud rate of the first profile to 30fps, the send rate of the second profile will be changed to 15fps.
- Menu items except Codec, Resolution, Transfer Rate, and Transfer Quality can be configured in the network camera's settings menu.
- If you change the current profile settings, you may encounter an interrupted playback on the recording or live screen for a certain time.

Channel Setting

You can configure the video settings for each channel.

Camera
Registration
Camera Setup
Channel Setup
CH
Video
Audio
Camera Name
Dwell Time
Scan Type
1 ON OFF CAM 01 5 sec Progressive
2 ON OFF CAM 02 5 sec Progressive
3 ON OFF CAM 03 5 sec Progressive
4 ON OFF CAM 04 5 sec Progressive
5 ON OFF CAM 05 5 sec Progressive
6 ON OFF CAM 06 5 sec Progressive
7 ON OFF CAM 07 5 sec Progressive
8 ON OFF CAM 08 5 sec Progressive
If you can not receive events from NVR, please check the network camera settings.
1/2
OK
Cancel

- Video
  - <**ON/OFF**> : You can turn ON/OFF the selected channel's camera.
  - <**Covert1**> : Shows information other than the video of the selected channel.
    For privacy protection, it does not display the video while the recording continues.
  - <**Covert2**> : Shows nothing but an empty screen while the recording continues.

- Audio
  - If set to <**ON**>, you can turn the audio of the channel ON/OFF on the Live screen.
  - If set to <**OFF**>, the channel's audio is off on the Live screen and not recorded.
- Camera Name : Provide a camera Name.
  - You can enter up to 15 characters including space.
- Dwell Time : You can specify the dwell time for each channel.
- Scan Type : Select either Interlace or Progressive as necessary.

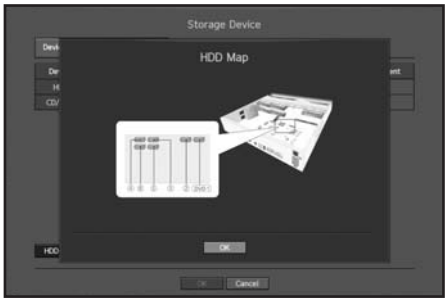
Storage Device

You can check information on storage devices.

Confirming Devices

You can check storage devices and their free space, usage as well as status.
Devices available are HDD, and USB devices (Memory, HDD, CD/DVD).

[**MENU**] ⇨ ▲▼ ⇨ <**Device**> ⇨ ► ⇨ <**Storage Device**> ⇨ <**Device**>



- No. : Shows the assigned number of the internal HDD.
  - To see the detailed positioning of the HDD according to the number, refer to <**HDD Map**>.
- Used/Total : Shows the used/total capacity of the storage device.
- Usage : Sets the storage device's usage.
  - Use both USB memory and HDD for backup purpose only.
  - The eSATA HDD can be used for either extended storage or backup purpose.
- Status/Management: Display the status of the storage device.
- HDD Map : Shows the internal HDD's locations according to assigned numbers.
  - Refer to this for servicing or additional HDD installation.

Formatting

You can format a storage device.

[MENU] ⇨ ▼ ⇨ <Device> ⇨ ►▼ ⇨ <Storage Device> ⇨ [ENTER] ⇨ ▲▼◄► ⇨ [ENTER] ⇨ ▲▼◄► ⇨ <Format> ⇨ ▲▼◄► ⇨ [ENTER]

- Select : Check the checkbox of the device that you want to format.
- Format : Select a device and press this to display the format confirmation dialog.
  Press <**OK**> to start formatting the selected storage device.

- Note that formatting the device will delete all of the existing recording data.
- Do never remove the device to format until formatting is completed.
- A HDD with greater than 2TB cannot be formatted for backup purpose.

HDD Alarm Setting

You can set alarm settings for HDD defects such as Check Alarm Output Port, Replace Alarm Output Port, and its duration.

[MENU] ⇨ ▼ ⇨ <Device> ⇨ ►▼ ⇨ <Storage Device> ⇨ [ENTER] ⇨ ▲▼◄► ⇨ <HDD Alarm> ⇨ ▲▼◄► ⇨ [ENTER]

- Alarm
  - Alarm signal will output through the alarm out port on the rear side when selected <**1**>, <**2**>, <**3**>, and <**4**>.
    - SRN-470D supports only alarms : <**1**> and <**2**>.
  - If <**BEEP**> was selected, a beep will sound.
  - If <**All**> was selected, both beep sound and alarm signal through rear side ports will output.

- Check Alarm Output Port : If HDD generates check alarm, the alarm signal will output to the specified alarm output port.
- Replace Alarm Output Port : If HDD generates replace alarm, the alarm signal will output to the specified alarm output port.
- Duration : Sets the alarm duration for the alarm signal and beep sound.
  - Check Alarm, Replace Alarm signals will output through the selected alarm out ports (1, 2, 3, and 4).
    - SRN-470D supports only alarms : <**1**> and <**2**>.
  - If <**BEEP**> was selected, a beep will sound.
  - If <**All**> was selected, both beep sound and alarm signal through rear side ports will output.

- <**Check**> status means that the HDD is operating but it has problems that require technical examination. ( ) appears on the Live screen.
- <**Replace**> status means that the HDD has defect and requires immediate replacement. ( ) appears on the Live screen.

Remote Devices

You can specify the ID of a remote control that will operate in sync with NVR.

[**MENU**] ⇨ ▼ ⇨ <**Device**> ⇨ ►▼ ⇨ <**Remote Devices**> ⇨ [**ENTER**] ⇨ ▲▼◄► ⇨ [**ENTER**]

- Remote Control : Specify the use of the remote control.
- ID : Select an ID number to synchronize with the remote control.
  If it does not match with the remote control ID, the remote control will not operate at all.

- For changing the remote control's ID, refer to "**Changing the Remote Control ID**". (Page 12)

Monitor

You can set the information displayed on the monitor as well as the output system.

Monitor settings

You can configure the monitor output-related settings including the displayed information, dwell time and output system.

[MENU] ⇨ ▼ ⇨ <Device> ⇨ ►▼ ⇨ <Monitor> ⇨ [ENTER] ⇨ ▲▼◄► ⇨ [ENTER]

- Event Display : Sets the dwell time of the event channel display on the monitor when an event occurs. If selected <**Continuous**>, it displays the channel until you press [**ALARM**] button to release it.
- Display : Displays only checked items on the monitor screen.
- Multi CH SEQ Time : Sets the interval between automatic display switching in 4-split and 9-split mode of the Live screen.
- Video Output : Select a video output type from <**VGA**> and <**HDMI**>.
  Only either one of <**VGA**> and <**HDMI**> will be output.
  If your selection of <**VGA**> or <**HDMI**> does not match with the monitor setting, the video may not be output.
  Move to [**STOP**] ➞ [**ZOOM**] ➞ [**STOP**] ➞ [**ZOOM**] and press [**MENU**] to display the default resolution dialog where you can change the resolution as you want.
  - If the changed resolution is not supported by the monitor, the video may not be displayed properly. If this is the case, the screen will restore the default resolution after a certain time. Then, you can change it to a different resolution.

- Specify the event display time and dwell time in consideration of the video delay depending on the network environment.

To adjust the display position

Some monitors many not display information (camera name, icon, time information, etc.) about the NVR, depending on the condition. Then, you can change the display position of the data.

1. From the monitor setup menu, select <**Display Position Setup**>.
2. Use the four direction buttons or number buttons on the remote controls to adjust the display position.
3. Press <**OK**>.

Setting the Screen Mode

You can configure the Live screen and Split Screens.

[**MENU**] ⇨ ▼ ⇨ <**Device**> ⇨ ►▼ ⇨ <**Monitor**> ⇨ [**ENTER**] ⇨ ▲▼◄► ⇨ <**Mode**> ⇨ ▲▼◄► ⇨ [**ENTER**]

- Live Screen : Select split modes for the Live screen.
  - You can switch the split mode only with SRN-1670D. The default settings include 16-split, 9-split and 4-split modes, which cannot be changed.

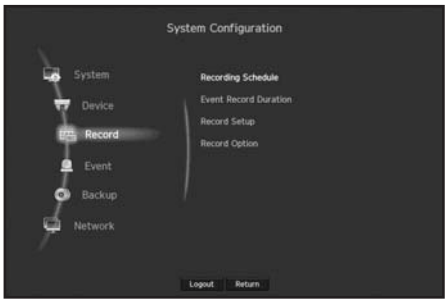
SETTING THE RECORDING

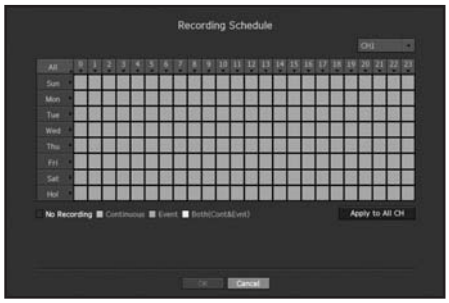
You can setup scheduled recording, event recording and other recording related settings.

Recording Schedule

Make your reservation on a date and time to schedule the recording on specified time.

[MENU] ⇨ ▼ ⇨ <Record> ⇨ ► ⇨ <Recording Schedule> ⇨ [ENTER] ⇨ ▲▼◄► ⇨ [ENTER]





- All : The entire time range (Monday through Sunday including holidays, AM 0~ PM 23) will be reserved with the same recording schedule
- Apply to All CH : If selected <**Apply to All CH**>, "**Apply to All CH**" window appears. Press <**OK**> to apply the setup to all channels.

▪ Event recording and scheduled recording starts about 3 seconds prior to the event/schedule for guaranteed recording.

Record setting by the color

Color	Function	Description
No Color	No Recording	No schedule / event recording
Green	Continuous	Scheduled recording only
Orange	Event	Event recording only
White	Both(Cont&Evnt)	Both scheduled / event recordings

Each press of a selected cell will cycle through <**No Recording**>-<**Continuous**>-<**Event**>-<**Both(Cont&Evnt)**>.

Event Record Duration

You can set the beginning and ending point of a recording on an event.

[MENU] ⇨ ▼ ⇨ <Record> ⇨ ►▼ ⇨ <Event Record Duration> ⇨ [ENTER] ⇨ ▲▼◄► ⇨ [ENTER]

- Pre Event : The recording of an event will start at a pre-determined time prior to the actual occurrence of the event. If it is set to 5 seconds, the recording begins from 5 seconds before the event.
- POST Event : The recording will continue for a pre-determined time after the actual end of an event. If it is set to 5 seconds, the recording ends in 5 seconds after an event.

■ If the video resolution is larger than 4CIF, recording may not proceed as much as the pre-event recording time. The greater the video data size is, the maximum pre-event recording time will be reduced in inverse proportion.

Record Setting

You can set resolution, IPS, and quality of recordings by channel, and by recording type of standard / event.

[MENU] ⇨ ▼ ⇨ <Record> ⇨ ►▼ ⇨ <Record Setup> ⇨ [ENTER] ⇨ ▲▼◄► ⇨ [ENTER]

- Full Frame : Save all the frames incoming from the camera.
- Key Frame : Save only major frames incoming from the camera. Normally, one or two frame per second will be recorded, which differs depending on the camera settings.
- OFF : Do not make recording.

- If the entire size of recording data exceeds 64 Mbps, the product will make recording only on key frames <**Key Frame**> even if you have set <**Full Frame**> as this may affect other operations.
  If you intend to record only key frames, the limited record icon will be displayed on the top of the Live screen.
- If you press [**ALARM**], the limited record icon will disappear. However, if the whole data size is over 64 Mbps again later, the icon will be displayed back again.

Record settings of the network camera

You can configure the video profile settings for instructing the network camera (connected to each channel) to make recording.

- You can configure the settings only for the profiles that are supported by the camera.

- Profile : Select a record profile for the connected camera.
- Codec : Show the codec information for the selected record profile.
- Resolution : Display the resolution for the selected record profile.
- Send Rate : Display the baud rate for the selected record profile.
- Quality : Display the video quality for the selected record profile.

Record Option

You can set the recording to stop or overwrite when the HDD is full.

[**MENU**] ⇨ ▼ ⇨ <**Record**> ⇨ ►▼ ⇨ <**Record Option**> ⇨ [**ENTER**] ⇨ ▲▼◄► ⇨ [**ENTER**]

- Disk End Mode : Select a HDD repetitive recording type.
  - Overwrite : If the HDD is full, this will overwrite the existing data and keep recording.
  - Stop : If the HDD is full, this will stop recording automatically.
- Disk End Beep : If you select <**Stop**> for the disk end mode, this button will be active. Specify the use of beep when the HDD recording ends.
  If you check it, the beep will sound on the disk full and the recording stops.
- Auto Delete : If you check this option, the period list box is active. Specify the deletion period to delete any earlier data than the specified date. However, you can search for data from the current time to the selected date.

▪ If you press <**OK**> when you have completed your settings, all the existing data earlier than the specified period will be deleted automatically. So it is recommend to backup the previous data if necessary for later use.

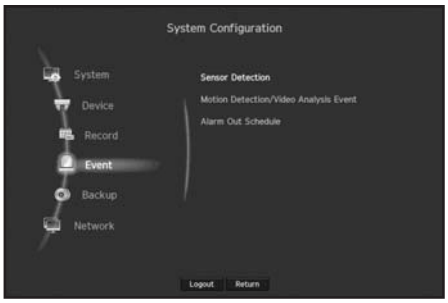
SETTING THE EVENT

You can set recording options for sensor, motion, and video loss event.

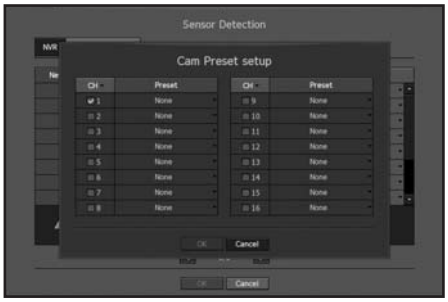
Sensor Detection

You can set the sensor's operating condition and connected camera, as well as alarm output and its duration.

[MENU] ⇨ ▼ ⇨ <**Event**> ⇨ ►▼ ⇨ <**Sensor Detection**> ⇨ [ENTER] ⇨ ▲▼◄► ⇨ [ENTER]



- Sensor Operation : Sets the operation mode of sensors.
  - <**OFF**> : Sensor does not operate.
  - <**N.O (Normal Open)**> : Sensor is opened. If the sensor is closed, it generates alarm.
  - <**N.C (Normal Close)**> : Sensor is closed. If the sensor is open, it generates alarm.



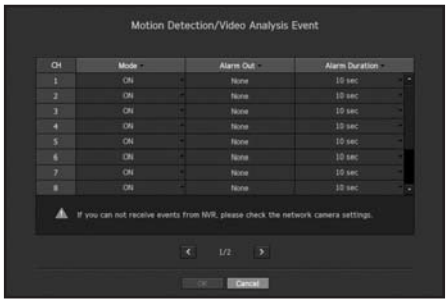
- Cam : Select a channel to be connected to the sensor.
  If selected camera, "**Cam Preset setup**" window appears.
  Select a channel and setup the preset.
  - Preset setup can be done in PTZ mode.
- Alarm out : Sets the alarm output method.
  - For further information on alarm output, refer to "**HDD Alarm** > **Alarm**". (Page 57)
  - SRN-470D supports only alarms <**1**> and <**2**>.
- Duration : Sets the duration of alarm signal and alarm sound.

- If you select <**Network Camera**> tab, you can configure the sensor operation settings of the network camera connected to each channel.
- If the connected network camera that has configured the alarm in/out settings triggers an alarm, NVR will perform the alarm out.

Motion Detection/Video Analysis Event

You can set target detection region and motion, as well as the alarm signal output.

[MENU] ⇨ ▼ ⇨ <Event> ⇨ ► ⇨ <Motion Detection/Video Analysis Event> ⇨ [ENTER] ⇨ ▲▼◄► ⇨ [ENTER]



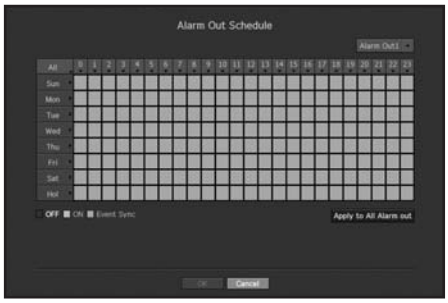
- Mode : Sets whether to activate motion detection.
  In Camera Setup, you should specify each of the motion detection area and sensitivity separately.
- Alarm Out : Sets the alarm output method.
- Alarm Duration : Sets the duration of alarm signal and alarm sound.

▪ NVR will output the alarm only if the connected network camera is set with the motion detection area and detects a motion within the area.

Alarm Out Schedule

You can set the conditions and operating hours for scheduled alarms.

[MENU] ⇨ ▼ ⇨ <Event> ⇨ ► ⇨ <Alarm Out Schedule> ⇨ [ENTER] ⇨ ▲▼◄► ⇨ [ENTER]



- Alarm Out : Sets the alarm output method.
  ▪ For further information on alarm output, refer to "**HDD Alarm** > **Alarm**". (Page 57)
  - <**ON**> : Marked in green, and always generates alarm on scheduled time.
  - <**OFF**> : Marked in black, no alarm is generated even if an event occurs.
  - Event Sync : Marked in orange, generates alarm only when an event occurs.
- Apply to All Alarm out : Applies the configured schedule to all alarms.

▪ When the alarm is generated on the scheduled time, you can stop the alarm by canceling the schedule.

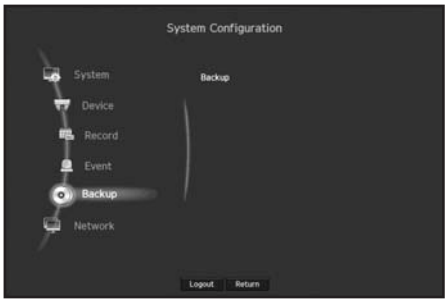
BACKUP

You can check the backup device and set the backup schedule by channel or by time.
This product (NVR) supports only : USB memory, DVD, and external HDD supporting USB/eSATA protocols. (Page 108)

Backup

You can back up a desired portion of the recording data stored in the HDD to an external device.

[**MENU**] ⇨ ▼ ⇨ <**Backup**> ⇨ [**ENTER**] ⇨ ▲▼◄► ⇨ [**ENTER**]



- Start/End : Sets the <**Start**> and <**End**> time for the backup.
- Overlap : Shows a list of overlapping data on a same time according to the number of data.
  It appears when one channel has multiple data on a certain time point due to changing of time or time zone settings, etc.
  - Refer to time and time zone of "**Date/Time/Language**". (Page 41)
- Channel : Sets the channel to backup. You can select multiple channels.
- Device : Select a backup device from the recognized devices.
- Type : Sets the backup data format.
  - NVR : Saved data can be played back only by the NVR.
  - SEC : Saves data in the Samsung's proprietary format with built-in viewer, which supports immediate playback on a PC.
- Filename : You can rename a backup file by providing up to 4 characters.
  - Refer to "**Using Virtual Keyboard**". (Page 43)
- Check capacity : Shows the size of the selected backup data, used and available capacity of the selected backup device. When backing up, insufficient storage alert indicates up to 2 times of its currently available storage size if the backup data size exceeds more than 2 times of available storage space, to avoid excessive disc/backup size checkup.

- If no available device is recognized for backup, <**OK**> button is not activated.
- The application may slow down during the backup.
- You can switch to the menu screen during the backup in operation, but playback of data is not available.
- When a CD/DVD or memory device is used for backup, it is not available to use the full capacity of the media since the system consumes a part of its capacity.
- If a CD or DVD media causes errors, the disc tray opens and closes a several times, and eventually backup process will fail. In this case, replace the CD/DVD media and try again.
- Do never remove the backup device until backup is completed.

- Pressing the <**Exit**> during the backup will return to the previous menu, while the backup progresses.

Menu Setup

NETWORK CONFIGURATION

It provides networked monitoring of Live screen from a remote place, and supports mail forwarding function with events. You can configure the network environment which enables such functions.

Connection Mode

You can set the network connection route and protocol.

Network 1/Network 2 connection settings

Sets the protocol and environment of the network.

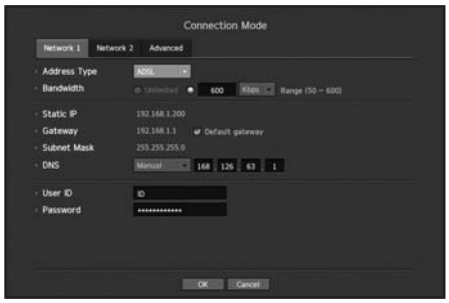
[MENU] ⇨ ▼ ⇨ <**Network**> ⇨ ► ⇨ <**Connection Mode**> ⇨ [ENTER] ⇨ ▲▼◄► ⇨ <**Network 1**> / <**Network 2**> ⇨ ▲▼◄► ⇨ [ENTER]

- Address Type : Sets the network connection mode.
- Bandwidth : Specify the upper limit of uploading data.
  You must check the connection mode before providing the maximum value as appropriate to the connection mode.
  - <**Static IP**>, <**Dynamic IP**> : Select "Unlimited" or enter the bandwidth manually.
  - For <**ADSL**> : The "unlimited" value will be inactive. Provide a possible bandwidth.
- Static IP, Gateway, Subnet Mask, and DNS
  - For <**Static IP**> : You can directly input IP address, Gateway, Subnet Mask and DNS.
  - For <**Dynamic IP**> : IP address, Gateway, and Subnet Mask are set automatically.
  - For <**ADSL**> : IP address, Gateway, and Subnet Mask are set automatically.
- User ID, Password : In case you selected ADSL, provide the "**User ID**" and its "**Password**".

■ DNS server for <**Dynamic IP**> and <**ADSL**> can be set by user only if you selected <**Manual**>.

Connecting and Setting the Network

Networking may differ from the connection method, check your environment before setting the connection mode.



When no router is used

- **Static IP mode**
  - Internet connection : Static IP ADSL, leased line, and LAN environments allows connection between the NVR and remote user.
  - NVR Network Settings : Set the <**Connection Mode**> in <**Connection**> menu of the connected NVR to <**Static IP**>.
  - Consult your network manager for IP, Gateway and Subnet Mask.

- **Dynamic IP (DHCP) mode**
  - Internet connection : Connect the NVR directly to a cable modem, DHCP ADSL modem or FTTH network.
  - NVR Network Settings : Set the <**Connection Mode**> in <**Connection**> menu of the connected NVR to <**Dynamic IP**>.

- **ADSL (PPPoE: ID and password certification)**
  - Internet connection : An ADSL modem is directly connected to the NVR, where the ADSL connection requires user ID and password.
  - NVR Network Settings : Set the <**Connection Mode**> in <**Connection**> menu of the connected NVR to <**ADSL**>.
  - ADSL <**User ID**> and <**Password**> should be the same to the ADSL user information. If you don't know the ID and password, consult your ADSL service provider.

When a router is used

■ To avoid IP address conflict with the NVR's static IP, check followings :

• Setting the NVR with a static IP

- Internet connection : You can connect the NVR to a router which is connected to an ADSL/Cable modem or a router in a Local Area Network (LAN) environment.

• Setting the NVR Network

1. Set the <**Connection Mode**> in <**Connection**> menu of the connected NVR to <**Static IP**>.
2. Check whether the set IP address is in the static IP range provided by the Broadband Router.
   IP, Gateway, and Subnet Mask : Consult your network manager.
   ■ Check whether the set IP address is in the static IP range provided by the Broadband Router.

■ If a DHCP server is configured with starting address (192.168.0.100) and end address (192.168.0.200), you should set the IP address out of the configured DHCP range (192.168.0.2 ~ 192.168.0.99 and 192.168.0.201 ~ 192.168.0.254).

3. Check the Gateway address and subnet mask are equal to those set in the Broadband Router.

• Setting the DHCP IP Address of the Broadband Router

1. To access the Broadband Router's configurations, open a web browser on the local PC that is connected to the Broadband Router and enter the router's address (ex : http://192.168.1.1).
2. At this stage, make the local PC's windows network configurations to the below example :
   Ex) IP : 192.168.1.2
   Subnet Mask : 255.255.255.0
   Gateway : 192.168.1.1

- Once connected to the Broadband Router, it prompts with password. While entering nothing to the User Name field, enter "**admin**" into the password field and press <**OK**> to access the router configurations.
- Access the router's DHCP configuration menu and set its DHCP server activation, and provide the start and end address.
  Set the start address (192.168.0.100) and end address (192.168.0.200).

■ Above steps may differ from the router devices depending on the manufacturer.

Advanced Setting

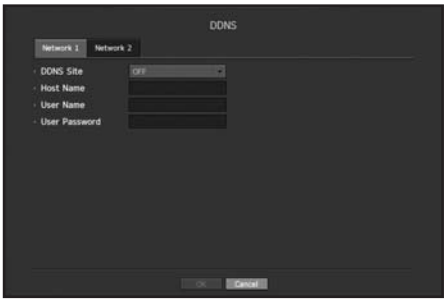
[MENU] ⇨ ▼ ⇨ <Network> ⇨ ► ⇨ <Connection Mode> ⇨ [ENTER] ⇨ ▲▼◄► ⇨ <Advanced> ⇨ ▲▼◄► ⇨ [ENTER]

- Protocol Type : Select the protocol type between TCP and UDP.
  - If you select UDP, the items of Port(UDP) and Unicast/Multicast will be active.
  - If set it to TCP, the Port (TCP) item will be active.
- Port (TCP) : Enter the connectable port number. Initially, <**554**> is set.
  - TCP: It has better stability and lower speed when compared to UDP, and recommended for internet environments.
- Port (UDP) : Initially, <**8000~8159**> is set. It increases / decreases by 160.
  - UDP : It has less stability and faster speed when compared to TCP, and recommended for local area network (LAN) environments.
- Unicast/Multicast : Select one between Unicast and Multicast.
  If selected Multicast, Multicast IP and TTL are activated.
  - Unicast : Transfers data (UDP, TCP) individually to each connecting client.
  - Multicast : Multiple client can receive the data (only in UDP) without putting additional traffic load to the network.
- Multicast IP : User can directly input.
- TTL : Select from 0 ~ 255. Initial value for the TTL is set to <**5**>.
- Webviewer Port : Enter the port number for the Web Viewer. Initially, it is set to <**80**>.

DDNS

You can set the DDNS site for a remote user's network connection.

[MENU] ⇨ ▼ ⇨ <Network> ⇨ ►▼ ⇨ <DDNS> ⇨ [ENTER] ⇨ ▲▼◄►⇨ [ENTER]



- DDNS Site : Specify the use of DDNS and select a site that you registered.
- Host Name : Provide the host name that you registered with the DDNS site.
- User Name : Provide the user ID that you registered with the DDNS Site.
- User Password : Provide the password that you registered with the DDNS site.

- Refer to "**Using Virtual Keyboard**". (Page 43)
- If you select <**OFF**>, the input box will be inactive.
- If you select <**iPOLiS**>, the host name input box will be inactive. The user name input box will be active.

DDNS Setting

DDNS is a short form of Dynamic Domain Naming System.
DNS (Domain Name System) is a service that routes a domain name consisting of user friendly characters (ex : www.google.com) to an IP address consisting of numbers (64.233.189.104).
DDNS (Dynamic DNS) is a service that registers a domain name and the floating IP address with the DDNS server so that the domain name can be routed to the IP address even if the IP is changed in a dynamic IP system.

- **Setting DDNS in the NVR**

  Set <**Protocol Type**> in the <**Protocol**> menu of the connected NVR to the following :

  Ex) Protocol Type : TCP
  Port (TCP) : 554, 555, 556, 557, 558
  DDNS Site : iPOLiS

- **DDNS Settings of the Router**

  Select the corresponding menu for the network transfer protocol of the router.

Live Transfer Setting

You can configure the profile to transfer the live video of each channel via the network.

- Profile : Select a network profile for the connected camera.
- Codec : Show the codec information for the selected network profile.
- Resolution : Display the resolution for the selected network profile.
- Send Rate : Display the baud rate for the selected network profile.
- Quality : Display the video quality for the selected network profile.

Mailing Service

You can send an e-mail to a NVR-registered user at a specific time interval, or if an event occurs.

■ If an event occurs with a channel where the camera's video is set to <**OFF**> or the remaining recording count is set to <**OFF**>, only the text notification will be sent to the applicable email address.

SMTP Setting

Sets the SMTP mail server.

[**MENU**] ⇨ ▼ ⇨ <**Network**> ⇨ ►▼ ⇨ <**Mailing Service**> ⇨ [**ENTER**] ⇨ <**SMTP**> ⇨ ▲▼◄► ⇨ [**ENTER**]

- ServerType : Displays the connected server type.
- Server : Enter a server to connect to.

- Port : Sets the communication port.
- Use Authentication : Check this if the SMTP server uses user authentication.
  The account input box will be activated.
- User : Enter a user to use authentication when connecting to the SMTP server.
- Password : Enter the password of the SMTP server user.
- Secure Transfer : Select one from <**Never**> and <**TLS (if available)**>.
- Sender : Use the virtual keyboard to enter the sender's e-mail address.
  - Refer to "**Using Virtual Keyboard**". (Page 43)
- TEST : Conducts the test on the server settings.

Event Setting

You can set the interval and type of the event that will be sent to the user.

[MENU] ⇨ ▼ ⇨ <Network> ⇨ ►▼ ⇨<Mailing Service> ⇨ [ENTER] ⇨ ▲▼◄► ⇨ <Event> ⇨ ▲▼◄► ⇨ [ENTER]

- Event Interval : Set the event interval.
  - If a series of events occurs, the e-mail will be sent at the specified interval, not on each event.
- Use Event Transfer : Select an event type to send if an event occurs.
  If the selected event occurs, the e-mail will be sent to the group that has the recipient authority.

Group Setting

You can set the group to whom the e-mail is sent, and specify the permission for each group.
Apart from the NVR user group, you can add email recipients from the <**Recipient**> item.

[MENU] ⇨ ▼ ⇨ <**Network**> ⇨ ►▼ ⇨<**Mailing Service**> ⇨ [ENTER] ⇨ ▲▼◄► ⇨ <**Group**> ⇨ ▲▼◄► ⇨ [ENTER]

- Group : Specify the recipient group who receives the email event notification.
  - Add : Select <**Add**> and use the virtual keyboard to add a group.
    - Refer to "**Using Virtual Keyboard**". (Page 43)
  - Delete : Deletes the selected group.
  - Rename : You can reset the recipient permission of an existing group.
- Recipient Permission : Set the permission of the recipient group.

Recipient Setting

You can add/remove a recipient(s) to/from the specified group and edit the group if necessary.

[MENU] ⇨ ▼ ⇨ <**Network**> ⇨ ►▼ ⇨<**Mailing Service**> ⇨ [ENTER] ⇨ ▲▼◄► ⇨ <**Recipient**> ⇨ ▲▼◄► ⇨ [ENTER]

- Select a recipient group who receives the email notification.
  The group list will be displayed only if you added at least one group to the <**Group**> item.
  - Add : You can select a recipient name, e-mail address or group.
    You should have created a group in the <**Group**> menu item before you can add a user to the group.
    - For inputting the recipient name and email address, refer to "**Using Virtual Keyboard**". (Page 43)

SEARCH

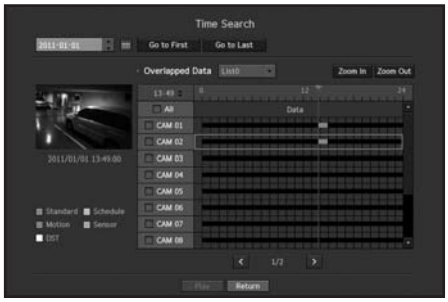
You can perform the search for recorded data by the time or by the search criteria such as an event.
You can access the <**Search**> menu directly in Live mode.

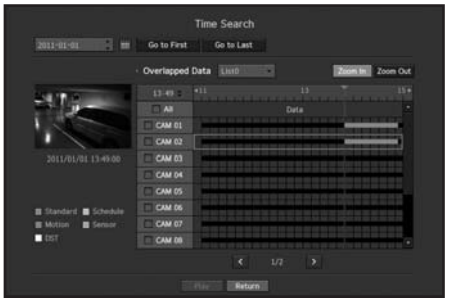
1. In Live mode, right-click any area, or press [**MENU**] on the remote control.
   The Live menu appears.
2. Select <**Search**>.
   Or press the [**SEARCH**] button on the remote control.
3. The Search menu should appear.
4. The search can be restricted by the Auto Delete function.
   Refer to "**Setting the Recording** > **Record Option**". (Page 64)

- Overlapped data : It only appears if there exists overlapped data on a certain time, produced due to the change of NVR's time setup. The latest data comes first, from <**List0**>.
  It does not appear in <**Backup Search**>.
- The search time is based on the time specified by NVR.

Time Search

You can search for recorded data of a desired time.
As the time to display may be different depending on the time zone and the DST standard time, the time of data recorded in the same time can be displayed differently depending on time zone and DST settings.





1. Select <**Time Search**> in the <**Search**> menu.
2. Use the number buttons or direction buttons (▲▼◄►) to specify the search period (date).
   - For using the calendar, refer to "**To use the calendar**". (Page 42)

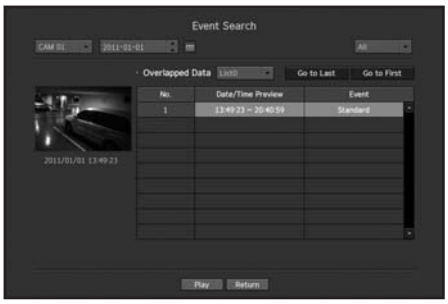
3. The record data on the specific date will be listed.
   The display bar is different according to the data type.
   So check the data type for the color in the left pane.
4. Use direction buttons (▲▼◄►) to set the search criteria and press the [**ENTER**] button.

- Go to First : Move to the earliest recording date.
- Go to Last : Move to the latest recording date.
- Time : Enter a time to perform the search or use the up/down button <▲▼> to select one.
- Zoom In : The map enlarges in detail.
  It will switch in the sequence of 24 hours - 16 hours - 8 hours - 4 hours.
- Zoom Out : The map will switch in the reverse order of the detailed mode above.
  It will switch in the sequence of 4 hours - 8 hours - 16 hours - 24 hours.
- Preview : Click <**Channel**> and select (click, drag) a time in <**Duration**> to display a still image for the portion.
  - If the selected channel does not contain any recorded data, it will be marked black.

5. Select a data item and click <**Play**>.
   The screen switches to the data playback mode.

Event Search

You can search for events by the channel and play them.



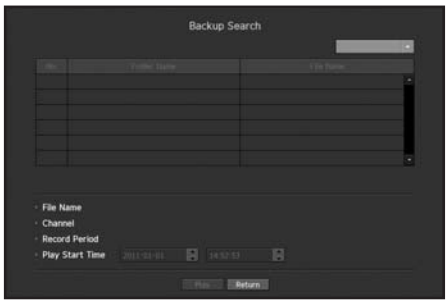
1. Select <**Event Search**> in the <**Search**> menu.
2. Use direction buttons (▲▼◄►) to set the search criteria and press the [**ENTER**] button.
   - According to the selected menu, the search will be applied differently for: Entire/Standard Recording/Scheduled/Sensor/Motion Recording/Other events.

- Date/Time Preview : If you select a data item in the list, the still image of the selected data will be displayed in the left preview pane.
- Event : Displays the type of the event that occurred.

3. Select a data item and click <**Play**>.
   The screen switches to the event data playback mode.

Backup Search

Searches for backup data in the connected backup device.
Only data in the format of NVR is included in the search.
Refer to <**Type**> in "**Backup** > **Backup**". (Page 67)



1. Select <**Backup Search**> in the <**Search**> menu.
2. Use direction buttons (▲▼◄►) to set the search criteria and press the [**ENTER**] button.

- Channel : Displays the recorded channel.
- Record Period : Displays the record period.
- Play Start Time : Select a time that you start playing.

3. Select a data item and click <**Play**>.
   The screen switches to the backup data playback mode.

PLAYBACK

Play

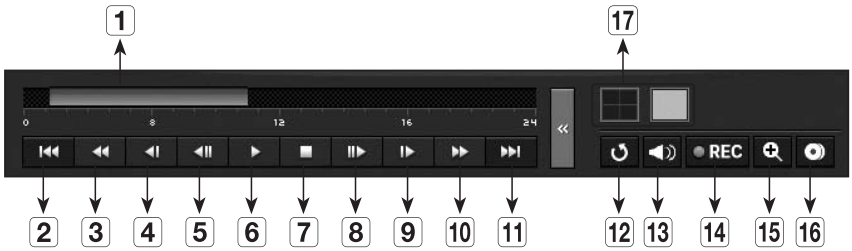
You can play data stored in the HDD and backup a desired portion of the data.

1. Select <**Play**> in the context menu of the Live screen, click < ▶ > in the launcher menu, or press [►] on the remote control.
2. Use the up/down button (▲▼) to select a menu.
   - If this is the first time you try to play, you will start with the data search window. For data search, refer to "**Search**". (Page 76)
3. Select a data item and click <**Play**> in the Search menu.
   The selected data is played and the play launcher appears on the screen.
   - If there is an existing data, <**Play**> will start immediately without performing the search.

- Playback Information : Displays the date and time of the current data in the top corner.
- Backup : Click < ● > to set the current time to the start time of backup; you can specify a backup area using the mouse (yellow triangle).
  Click < ● > again to set the current time to the end time of the backup and the "**Backup Range**" window appears.
  - Type : Supports formats of NVR and SEC.
    Refer to a list of formats in "**Backup**". (Page 67)
  - Device : Select a backup device.
  - Check Capacity : Enables you to check the capacity of the selected storage device.

4. To return to the Live screen during the playback, click < ■ > in the launcher menu or press [■] on the remote control.

Using the Playback Button

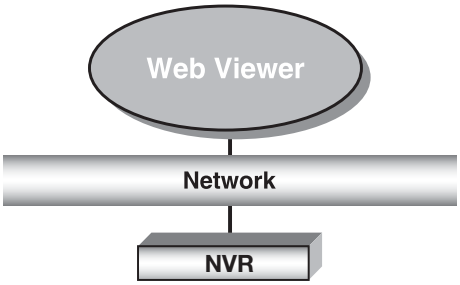


Name		Description
1	Play Timeline	Indicates the current playback point, and can be used to move.
2	Skip Backward	Moves backward by unit time.
3	Backward Fast Play	Used for quick backward search while in Play.
4	Backward Slow Play	Used for backward frame-by-frame search while in PAUSE.
5	Step Backward	Moves backward by one frame at a time.
6	Pause	Stops playing the current video temporarily.
7	Stop	Stops playback and moves to the live screen.
8	Step Forward	Moves forward by one frame at a time.
9	Forward Slow Play	In a split mode, the real time playback may not be supported, depending on the record quality, resolution and number of channels. And some frame rates may be supported.
10	Forward Fast Play	Used for quick forward playback.
11	Skip Forward	Moves forward by unit time.
12	Return	Return to the search setup screen.
13	Audio	Sets Audio ON/OFF.
14	REC	Records all channels in Live mode.
15	ZOOM	This is available in Single mode, which will enlarge the video from a selected channel. To cancel the zooming, simply double-click the enlarged image or select <**Close Zoom**> in the Live screen menu.
16	Partial Backup	Begins backup of the selected section of the video being played, with the specified starting/ending point.
17	Mode Switch	Click a desired playback mode or press [**MODE**] to switch the screen mode in sequence.

INTRODUCING WEB VIEWER

What is Web Viewer?

Web Viewer allows remote access to your NVR(Network Video Recorder). You have access to live video, archived video, PTZ control (if configured), etc.



Product Features

- Remote connection using the browser
- PTZ camera control enabled
- Supports 1, 4, 9, 16 camera viewing formats (maximum of 16 cameras in the list).
- Gets JPEG format images to print and save to “Print or Save JPEG, BMP format images”.
- Record video in AVI format-compatible with popular media players. (The integrated codec is needed)

System Requirements

The following lists the minimum suggested hardware and operating system requirements needed to run the Web Viewer.

OS	Windows XP Professional Windows 2000 Windows Vista Home Basic /Premium Windows 7
Web Browser	Internet Explorer 6.0.2900.2180 or higher
CPU	Intel Pentium 4. 2 GHz
Memory	512 MB
Monitor	High Color 16-bit 1024 x 768
HDD	50 MB(Installation space required) * Additional HDD space required for recording. Recorded file size will vary depending on recording quality settings.

CONNECTING WEB VIEWER

1. Open your web browser and type the IP address or URL of NVR into the URL address box.

- You must have specified the IP address in "**Network** > **Connection Mode**".
- The URL connection will be enabled only when the DDNS connection settings have been completed. For more information, refer to "**Network Configuration** > **DDNS**". (Page 72)

2. A user with the admin permissions should provide the admin ID and password. A registered user should provide the user ID and password.

- The default password can be exposed to a hacking thread so it is recommended to change the password after installing the product. Note that the security and other related issues caused by the unchanged password shall be responsible for the user.

- It allows up to 10 simultaneous access including the Admin and general users.
- It does not allow multiple login of the Admin user.
- The default ID of the admin account is "**admin**", and the default password is "**4321**".
- Password of the Admin and general users can be changed in <**Permission Management**> menu of the NVR.
- Normal users should have set <**Webviewer**> under <**Restriction on Network Access**> to "Use" before connecting to the Web Viewer. (Page 46)
- All settings are applied by the NVR's settings.

3. Click <**Install ActiveX Control...**>.

4. Click <**Install**>.

Internet Explorer - Security Warning
Do you want to install this software?
Name: GVersionMan.cab
Publisher: Samsung Techwin Co., Ltd.
More options
Install
Don't Install
While files from the Internet can be useful, this file type can potentially harm your computer. Only install software from publishers you trust. What's the risk?

5. You may have "**Windows Security Alert**" that attempts to block this with the Windows Firewall. In that case, click <**Unblock**> to start Web Viewer.
6. Installation is complete.
   Now you can see the main screen of Live Viewer.

Windows Security Alert
To help protect your computer, Windows Firewall has blocked some features of this program.
Do you want to keep blocking this program?
Name: Internet Explorer
Publisher: Microsoft Corporation
Keep Blocking
Unblock
Ask Me Later
Windows Firewall has blocked this program from accepting connections from the Internet or a network. If you recognize the program or trust the publisher, you can unblock it. When should I unblock a program?

USING LIVE VIEWER

The Live Viewer screen consists of following :

1. This displays the IP address and the model name of the connected NVR.
2. These menus consist of <**LIVE**>, <**SEARCH**>, <**SETUP**>, <**ABOUT**>.
3. Select a split mode or full screen mode.
4. Shows the IP address and model name of the connected NVR.
5. Select a desired channel to output the audio signal.
6. Select <**NVR Time**> or <**PC Time**> for the format of OSD information that will be displayed on Live Viewer.
7. These buttons are used for sequence and changing the screen channel.
8. These buttons are used for capture, print, and save the image.
9. Shows the channel of the connected NVR.
10. These buttons are used for PTZ related functions.
11. This displays the screen for connected camera with NVR.

■ The initial split-screen mode is set according to the number of channels connected to NVR. You can change the split-screen mode by clicking buttons for split-screen modes.

OSD Information Display

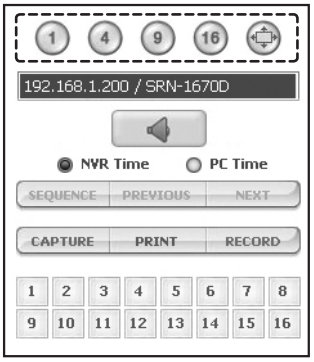
1. The channel number, video size, and IP address of the connected NVR are displayed.
2. The current date and time will be displayed according to the selected time information display setting <**NVR Time**> or <**PC Time**>
3. Alarm icon appears when alarm is issued.
   It disappears when pressed the [**ALARM**] button of the NVR.
4. Motion icon appears when motion is detected.
   It disappears when pressed the [**ALARM**] button of the NVR.
5. It displays whether the PTZ controls are active.

▪ If you have set PTZ cameras for the NVR, "**PTZ**" is displayed on the screen. Select a PTZ camera channel and use the [**PTZ**] button for camera control.

Split-Screen

You can change the split mode by clicking each number icon.

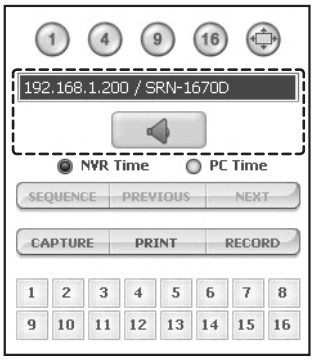
<SINGLE MODE> <QUAD MODE> <NINE MODE> <SIXTEEN MODE>



- Click <1> button.
  The screen displays the selected camera connected to the NVR in "**SINGLE MODE**".
- Click <4> button.
  The screen displays the selected camera connected to the NVR in "**QUAD MODE**".
- Click <9> button.
  The screen displays the selected camera connected to the NVR in "**NINE MODE**".
- Click <16> button.
  The screen displays the selected camera connected to the NVR in "**SIXTEEN MODE**".
- Click <> button.
  The screen displays the selected camera connected to the NVR in "**FULL SCREEN MODE**".
  Double clicking on the screen or pressing any button of the keyboard returns to the previous mode.

Connected NVR

This displays the IP address and the status of the connecting NVR.



- Connection failure message
  No Response : Appears when the NVR does not respond.
  Access Denied : Appears when the maximum number of users is exceeded.
- The number of simultaneous connections are limited to 10.

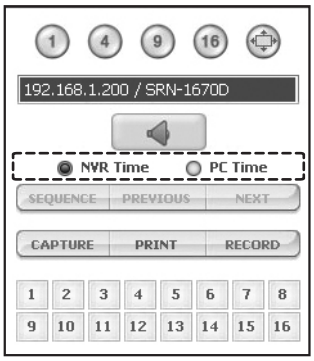
Audio

Sound On/Off. The audio signal of the selected channel will output.

Setting the display of the OSD time information

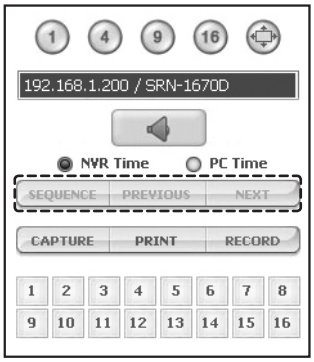
Select <**NVR Time**> or <**PC Time**> for the OSD time information display setting.

- **NVR Time** : Based on the time of the connected NVR.
- **PC Time** : Based on the time of the PC currently running the Web Viewer.



Changing the Live Screen Mode

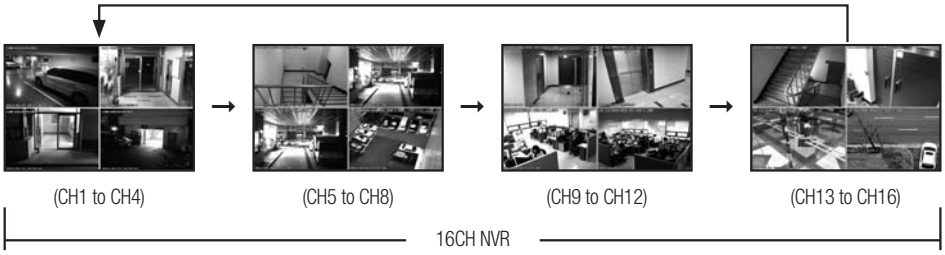
- 16-split mode does not support "**SEQUENCE**", "**PREVIOUS**" and "**NEXT**".



- **SEQUENCE** : When this button is clicked, screens are switched at a preset interval.
  In SINGLE MODE, the channel numbers are sequentially switched from 1 to 16.
  In QUAD MODE, the screens are changed like 1st 4 channels (1~4) → 2nd 4 channels (5~8) → 3rd 4 channels (9~12) → 4th 4 channels (13~16).
  In NINE MODE, the screens are changed from 9 channels (1~9) to 7 channels (10~16).
  In SIXTEEN MODE, the screen refreshes at the preset interval.
  - Preset interval (10 seconds)

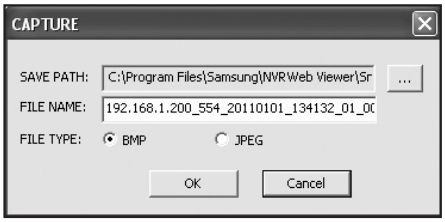
- **PREVIOUS** : When this button is clicked, the previous screen appears.
  In SINGLE MODE, the channel numbers are switched in reverse order.
  In QUAD MODE, the screens are changed like 1st 4 channels (1~4) → 2nd 4 channels (13~16) → 3rd 4 channels (9~12) → 4th 4 channels (5~8). In NINE MODE, the screens are changed from 9 channels (1~9) to 7 channels (10~16).
  In SIXTEEN MODE, the screen is refreshed.

- **NEXT** : When this button is clicked, the next screen appears.
  In SINGLE MODE, the channel numbers are sequentially switched from 1 to 16.
  In QUAD MODE, the screens are changed like 1st 4 channels (1~4) → 2nd 4 channels (5~8) → 3rd 4 channels (9~12) → 4th 4 channels (13~16).
  In NINE MODE, the screens are changed from 9 channels (1~9) to 7 channels (10~16).
  In SIXTEEN MODE, the screen is refreshed.
  - If 16-channel NVR is connected, clicking "**NEXT**" in QUAD MODE is to change the screen as shown in the picture.



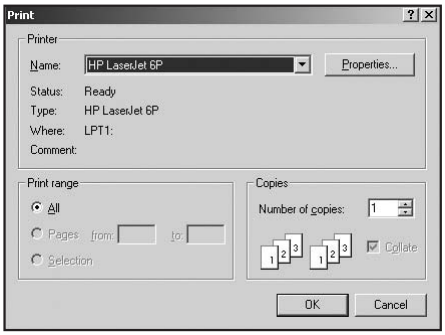
Saving the Live Screen on the PC

- **CAPTURE** : Saves the current screen into a BMP or JPEG file.

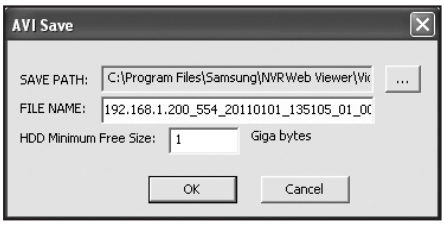


  - The default saving path is "C:\Program Files\Samsung\NVR Web Viewer\SnapShot\Live". To change the saving path, click <**SAVE PATH** (...)> button and then select the path you want. For Windows Vista or 7, the saving path is "C:\users\(user ID)\AppData\LocalLow\Samsung\NVR Web Viewer\Snapshot\".
  - The file is automatically named as following : "IP address_Port number_YYYYMMDD_camera number_index"
    Ex) 192.168.1.200_554_20110101_134132_01_00

- **PRINT** : Prints out the selected screen out of the currently displayed live screens. It also prints the IP address, time, camera number and the current event status together



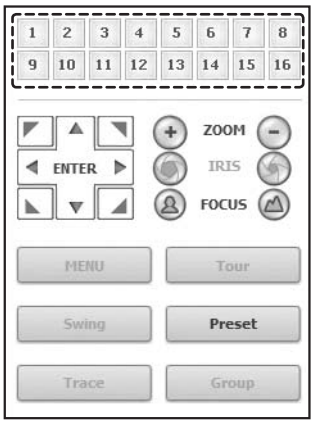
• **RECORD** : Saves the current image on the screen and saves it as a avi video file.



- To record it, it is required at least 1GB of available space.
- The default saving path is "C:\Program Files\Samsung\NVR Web Viewer\VideoClip\Live". To change the saving path, click <**SAVE PATH** (...)> button and then select the path you want. For Windows Vista or 7, the saving path is "C:\users\(user ID)\AppData\Local-Low\Samsung\NVR Web Viewer\VideoClip\".
- The file is automatically named as following : "IP address_Port number_YYYYMMDD_camera number_index" Ex) 192.168.1.200_554_20110101_135105_01_00
- For AVI Save, you need the integrated codec for playing saved files.
- HDD Minimum Free Size : During the recording, if there is no more capacity available in the HDD than set free space will prompt with a popup message : "**Cannot record due to insufficient disc space in the HDD**".

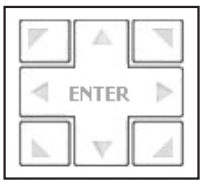
Changing the Live Screen Channel

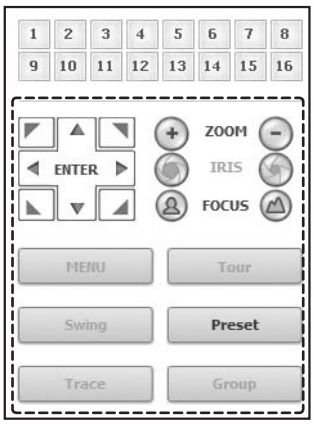
- Blue numbers : The current channel has a camera connected.
- Gray numbers : The current channel has no camera connected.



Using PTZ Camera

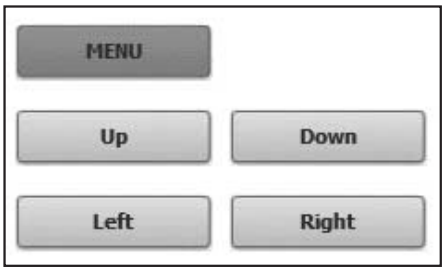
Click the direction buttons to control the camera.





- < ZOOM >
  You can zoom in or out an image by using the ZOOM button.
- < IRIS >
  You can adjust the entering light amount by using the IRIS button.
- < FOCUS >
  You can adjust the focus by using the FOCUS button.

• **MENU** : Appears the camera menu screen.



• **Preset** : Moves the lens direction to a preset direction.

1. If you click a preset, the camera moves to the selected preset's position.

2. You can delete the selected preset or all presets.

3. You can save a new preset number and name.

▪ You can save presets up to 20.

• **Swing** : Moves the camera lens direction between 2 points set for the camera.

• **Group** : Moves the camera lens direction between 2 preset points of the camera.

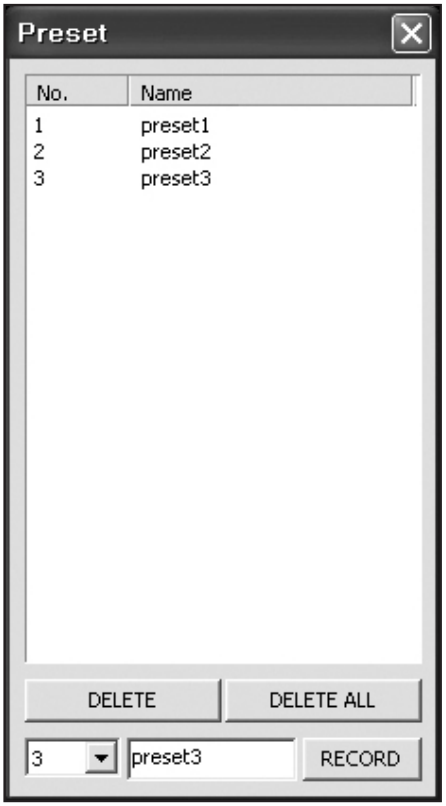
• **Trace** : You can set camera various movement patterns such as zoom, move, etc. so that a camera automatically moves according to the pattern.

▪ While the NVR controls a PTZ camera, Web Viewer cannot control the camera.

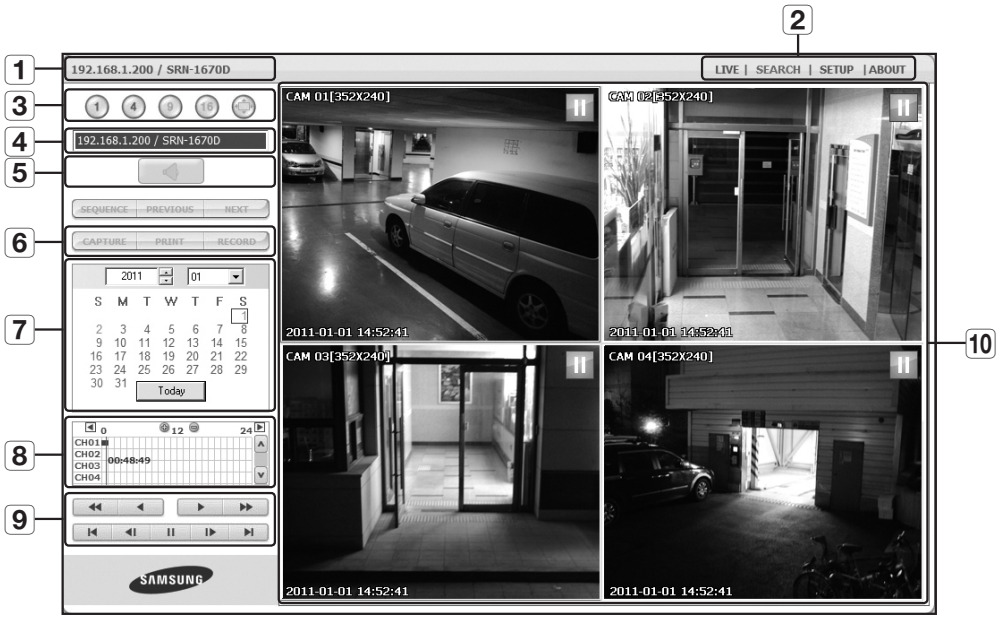
▪ Camera menu setup is only available for camera supporting the function.

▪ Each function of PTZ is same to that of the NVR.

• **Tour** : This is to call a group and its presets in order and to monitor the overall process.



USING SEARCH VIEWER



The Search Viewer screen consists of following :

1. This displays the IP address and the model name of the connected NVR.
2. These menus consist of <**LIVE**>, <**SEARCH**>, <**SETUP**>, <**ABOUT**>.
3. These buttons are used for the screen split and full screen mode.
4. Shows the IP address and model name of the connected NVR.
5. Select a desired channel to output the audio signal.
6. These buttons are used for capture, print, and save the image.
7. This displays a calendar at which you can search the recorded video.
8. This displays a timeline at which you can search the recorded video by the time.
9. These buttons are used for controlling playback.
10. This displays the screen for playback of recorded video.

▪ <**SEQUENCE**>, <**PREVIOUS**>, <**NEXT**> buttons are not available in SEARCH menu.

Split-Screen

You can change the split mode by clicking each number icon.

<SINGLE MODE>

<QUAD MODE>

- Click <(1)> button.
  The screen displays the selected camera connected to the NVR in "**SINGLE MODE**".
- Click <(4)> button.
  The screen displays the selected camera connected to the NVR in "**QUAD MODE**".

- Only SINGLE and QUAD MODE are available in SEARCH menu.
- If 16CH NVR is connected, you can select one between channel 1 and channel 16.

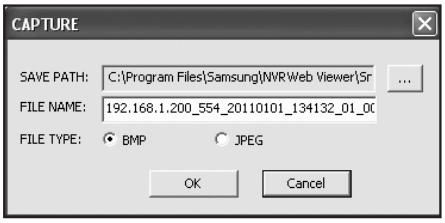
Connected NVR

Display the IP address and operation status of the connected NVR.

- Connection failure message
  No Response : Appears when the NVR does not respond.
  Access Denied : Appears when the maximum number of users is exceeded.
- The number of simultaneous connection is limited to 3.

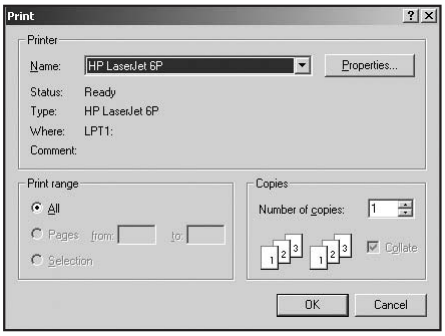
Saving the Live Screen on the PC

• **CAPTURE** : Saves the current screen into a BMP or JPEG file.

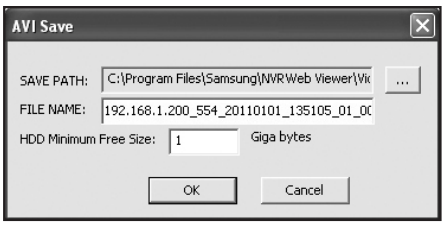


- The default saving path is "C:\Program Files\Samsung\NVR Web Viewer\SnapShot\Search". To change the saving path, click <**SAVE PATH** (...)> button and then select the path you want. For Windows Vista or 7, the saving path is "C:\users\(user ID)\AppData\LocalLow\Samsung\NVR Web Viewer\Snapshot\".
- The file is automatically named as following : "IP address_Port number_YYYYMMDD_camera number_index"
  Ex) 192.168.1.200_554_20110101_134132_01_00

• **PRINT** : Print out the current search screen.
It also prints IP address, time, camera number and current event state.



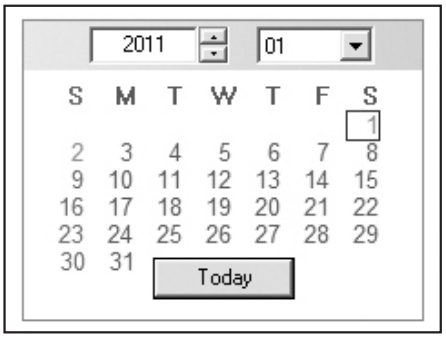
• **RECORD** : While in playback, press this button saves the video data of the selected channel as an AVI file. (It is saved in the designated folder on your PC.)
To stop recording, click this button again.



- To record it, it is required at least 1GB of available space.
- The default saving path is "C:\Program Files\Samsung\NVR Web Viewer\VideoClip\Search". To change the saving path, click <**SAVE PATH** (...)> button and then select the path you want. For Windows Vista or 7, the saving path is "C:\users\(user ID)\AppData\LocalLow\Samsung\NVR Web Viewer\VideoClip\"
- The file is automatically named as following : "IP address_Port number_YYYYMMDD_camera number_index"
  Ex) 192.168.1.200_554_20110101_135105_01_00
- For AVI save, you need the integrated codec for playing saved files.

Searching the Recorded Video in the Calendar

If the video data has been recorded on a date, the date is distinguished in green. If you click the date, the recorded video information is displayed in the time line. Click <**Today**> to change the date to today.



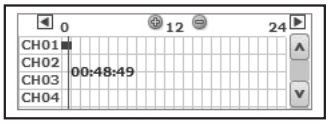
Searching the Recorded Video in the Timeline

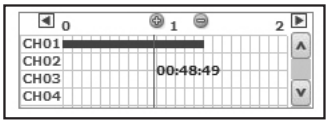
It displays the recorded video data status on the NVR after a date is selected. The normal mode displays the time ranging from 0 to 24 Hours while the extension mode displays the time every 2 hours.

[Normal Mode]
- If you click <⊕> button, it changes to the extension mode.
- Each time line represents 1 hour.

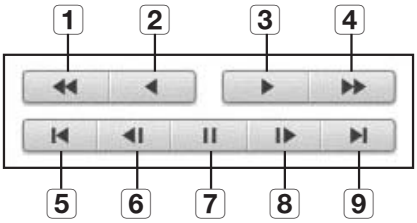
[Extension Mode]
- If you click <⊖> button, it changes to the normal mode.
- Each time line represents 5 minutes.

- If 16 channels are connected to the NVR, you can select one from channel 1 to channel 16.
- If you move to the next channel, the search range will switch to in the sequence of: 1~4, 5~8, 9~12, 13~16.





Controlling Playback



1 **Fast Backward** : Reverse-plays faster.
Each time you press the button, the play speed will switch to: x2, x4, x6, x8, x16, x32 and x64.

2 **Reverse Play** : Performs Reverse Play.

3 **Play** : Performs playback.

4 **Fast Forward** : Plays faster.
Each time you press the button, the play speed will switch to: x2, x4, x6, x8, x16, x32 and x64.

5 **Go to First** : Moves the beginning time of recorded video in the time line.

6 **Step Backward** : Performs one step reverseplay by one frame.

7 **Pause** : Stops the playback temporarily.

8 **Step Forward** : Performs one step forward by one frame.

9 **Go to Last** : Moves the last time of recorded video in the time line.

VIEWER SETUP

You can configure the NVR settings remotely on the network.
To configure the NVR settings, click <**Setup**>.

System

You can configure the various settings of the NVR system.

Date/Time/Language

For more information, refer to "**Date/Time/Language**" in the "**System Setup**" menu. (Page 41)

Date/Time

Set the date and time.

Time Synchronization Setup

Set the time synchronization.

Display

Date Format : Set the date type.

Time : Select a time format to display on the screen.

DST (Daylight Saving Time)

DST is displayed an hour ahead of the standard time of the time zone.

Language

Select a preferred language for the NVR.

Holiday

You can set specific dates to Holidays according to your preferences.
For more information, refer to "**Setting Holiday**" in the "**System Setup**" menu. (Page 42)

Permission Management

For more information, refer to <**Permission Management**> in the "**System Setup**" menu. (Page 43)

Admin

You can change the admin ID or the password.

Group

Users are classified into groups and the permission can be set according to the group.

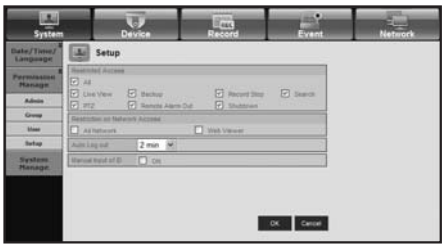
- First of all, add a group.

User

You can add, change or remove a user or users.

Setup

You can set the user permission.



System Management

For more information, refer to <**System Management**> in the "**System Setup**" menu. (Page 47)

System Information

You can see information of the current system.
Check the software version and MAC address.

Device

You can check a list of devices that are connected to the NVR and configure the necessary settings.
Click <**Device**> in the menu screen.
For more information, refer to "**Setting the Device**". (Page 52)

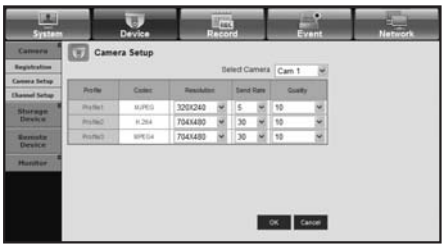
Camera

Registration

You can add a network camera(s).

Camera Setup

You can change the settings of a connected network camera.



Channel Setup

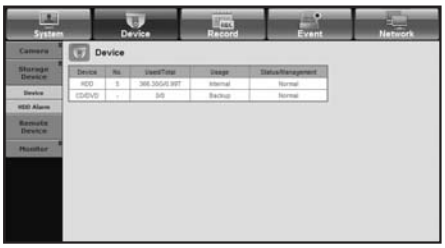
You can configure the video settings for each channel.

Storage Device

You can check and change the settings related to the data storage device.

Device

You will see a list of storage devices that are connected to the NVR.
You can check the type, used/total, usage and status of the device.



HDD Alarm

You can set the alarm output channel and the alarm duration for an error.

Remote Device

You can specify the ID of a remote control that will operate in sync with NVR.

Monitor

Monitor

You can configure the monitoring screen settings and set the output system.

- If the video is not played properly, refer to the troubleshooting section later in this manual. (page 115)

Mode

You can switch between live mode and play mode.

Record

For more information, refer to "**Setting the Recording**". (Page 61)

Recording Schedule

If you set a recording schedule for a specific date and time, the recording will start at that specific time.

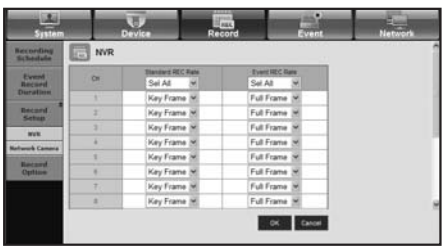
Event Record Duration

You can set the start and end times of recording that will be activated if an event occurs.

Record Setup

NVR/Network Camera

Select a type of the normal/event recording frame rate for each channel.



Network Camera

You can configure the record-related settings of the network camera.

Record Option

You can set the Disk End Mode.

Event

For more information, refer to "**Setting the Event**". (Page 65)

Sensor Detection

NVR/Network Camera

You can set the sensor operation mode and the synchronized camera as well as the alarm output type and the duration.

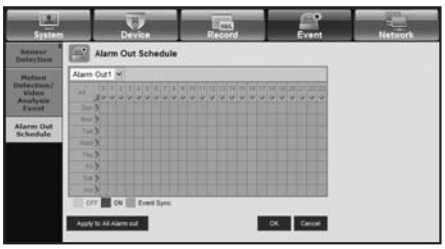
- If the connected network camera that has configured the alarm in/out settings triggers an alarm, NVR will perform the alarm out.

Motion Detection/Video Analysis Event

You can set the motion detection mode as well as the alarm output type and the duration.

Alarm Out Schedule

You can schedule the alarm output according to the day of the week and the time.
The default setting is Event Sync, which activates the alarm only if an event occurs.



Network

For more information, refer to "**Network Configuration**". (Page 68)

Connection Mode

A remote user can access the NVR via the network to check the current mode and the IP address.

Network 1/2

Specify the network connection path.

Advanced

You can configure the protocol related settings.

DDNS

Network 1/2

You can check the DDNS settings.

Live Transfer

You can configure the network transfer settings of the network camera.

Mailing Service

You can specify the SMTP server that sends a mail if an event occurs and set the recipient group and users.

SMTP

You can set the server that sends mails and specify if you use the authentication process.

Event

You can set the event interval and specify which events the server sends mails for.

Group

You can add a group to receive the mail if an event occurs and set the permission to receive the event mail for each group.

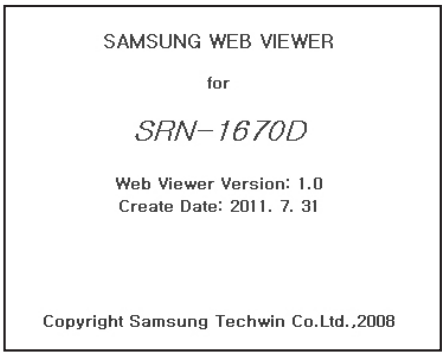
Recipient

You can add a user or users who will receive the mail.

ABOUT

Click <**ABOUT**>.

Displays the model name of connected NVR and the version of Web Viewer.



backup viewer

SEC BACKUP VIEWER

You can play a file that is backed up in the format of SEC.
Backup in the format of SEC will involve in generating two files: one for the backup data and one for the viewer.
If you run the backup file viewer, the backup data file will be automatically played.

Recommended System Requirements

PCs with a lower specification than the recommended below may not fully support forward/backward and high-speed playback.

- OS : Windows XP professional, Windows Vista, Windows 7
- CPU : Intel Core 2 Quad 2.5GHz or higher
- RAM : 3GB or more
- VGA : Geforce 6200 or higher

backup viewer

Name			Description
1	Audio		A toggle button. Each time you press this button, the audio output will toggle between activated and deactivated.
			You can adjust the volume level from 0 to 100.
2	Screen Printout		Saves the current screen as an image file. Supported file formats include BMP and JPEG.
			Prints out the current screen. You should have installed the appropriate printer driver before you can print out the screen.
3	File Tamper Detection		A toggle button. Each time you press this button, it will toggle between activated and deactivated. The closed lock icon indicates activation of the file tamper detection, which will blink the screen three times and stop playing if an unauthorized manipulation of a data file is detected. ▪ A message of "The file is forged" will display in the menu bar.
4	Zoom In/Out		Collapses the time range that is displayed on the range bar of the storage time. You can collapse the range bar until the overall range is shortened to 24 hours.
			Enlarges the time range that is displayed on the range bar of the storage time. You can enlarge the range bar until the overall range is extended to 1 minute.
5	Display of storage time range		Displays the time range of a stored video file. You can move the gridline of the range bar to select a time point to play.
6	Speed		A toggle button; each time you press this button, the "Slow Playback " icon changes its color to display it's activated/deactivated. ▪ The play speed may differ depending on resolution. For more information, refer to "**Speed difference according to the resolution**".
			A toggle button; each time you press this button, the "Lock Speed" icon changes its color to display it's activated/deactivated. If activated, the adjusted speed will be kept even if you release the mouse on the speed bar. If deactivated, the adjusted speed will be applied only while you use the mouse to hold the adjusted speed, and if you release the mouse, the speed will restore to x1.
			You can adjust the play speed up to x32 forward and backward respectively, which varies according to the frame rate per second of the source. ▪ The play speed may differ depending on resolution. For more information, refer to "**Speed difference according to the resolution**".
7	Play		Displays the next frame. This is available only if the playback is stopped.
			A toggle button. Press it once to start playing the video and switch the button mode to 'Pause', and press it again to switch the button mode to Play and stop playing temporarily.
			Displays the previous frame. This is available only if the playback is stopped.

❖ Speed difference according to the resolution

- XGA(1024X768) or lower
  - 30fps ~ 20fps: x2 forward/backward
  - 20fps ~ 10fps: x4 forward/backward
  - 10fps ~ 5fps: x8 forward/backward
  - Less than 5fps: x16 forward/backward
- 0.9M(1280X720 : 720p) ~ 1.3M(1280X1024 : SXGA)
  - 30fps ~ 25fps: x1 forward/backward
  - 25fps ~ 20fps: x2 forward/backward
  - 20fps ~ 10fps: x4 forward/backward
  - 10fps ~ 5fps: x8 forward/backward
  - Less than 5fps: x16 forward/backward
- UXGA(1600X1200 : 1.9M) or higher
  - 30fps ~ 5fps: x1 forward/backward
  - Less than 5fps: x2 forward/backward

PRODUCT SPECIFICATION

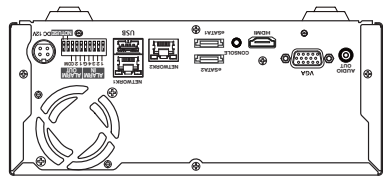
Item		Details	
Model		SRN-470D	SRN-1670D
Video In		Max. 4CH	Max. 16CH
Video Out		VGA(1)/ HDMI(1)	VGA(1)/ HDMI(1)
Compression		H.264, MJPEG, MPEG-4	H.264, MJPEG, MPEG-4
Display	Speed	120fps, 4CIF(704x480)	240fps, 4CIF(704x480)
	Split Mode	1/4/Auto Sequence	1/4/6/8/9/13/16/Auto Sequence
	Monitor Out	VGA(1024x768/1280x1024(60Hz)/ HDMI(720p/1080p(60Hz)	VGA(1024x768/1280x1024(60Hz)/ HDMI(720p/1080p(60Hz)
Record	Speed	64Mbps (4 channels)	64Mbps (16 channels)
	Resolution	4CIF(704x480)/ SVGA(800x600)/ 1.3M(1280x1024)/ 2M(1920 x 1080)/ 3M(2048 x 1536)	4CIF(704x480)/ SVGA(800x600)/ 1.3M(1280x1024)/ 2M(1920 x 1080)/ 3M(2048 x 1536)
	Type	Normal, Scheduled, Event (Pre/Post)	Normal, Scheduled, Event (Pre/Post)
Play	Simultaneous playback	4 channels	4 channels
	Resolution	4CIF(704x480)/ 1.3M(1280x1024)/ 2M(1920 x 1080)/ 3M(2048 x 1536)	4CIF(704x480)/ 1.3M(1280x1024)/ 2M(1920 x 1080)/ 3M(2048 x 1536)
	Play	Fast Forward/Fast Backward, Slow Forward/Slow Backward, Move one step up/Move one step down	
	Ethernet	Gigabit Ethernet x 2	
HDD	Built-in	500GB HDD	1TB HDD
	Extended	-	4
Backup	Device	2 USB (front 1 ports, rear 1 port), DVD R/W	3 USB (front 2 ports, rear 1 port), DVD R/W
	File	BU (proprietary to NVR), EXE (executable file)	BU (proprietary to NVR), EXE (executable file)
Extended Interface		External eSATA pots (x2) ▪ Compatible external storage (SVS-5R)	External eSATA pots (x2) ▪ Compatible external storage (SVS-5R)
Sensor	I/O	4/2	16/4
Voice	Input	4 channels (network)	16 channels (network)

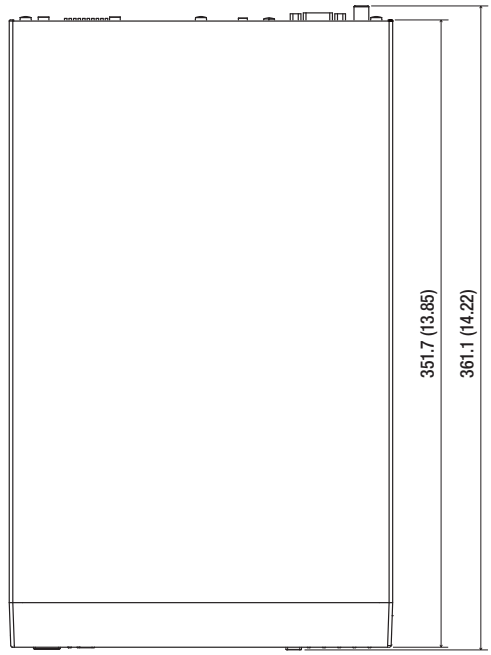
Item		Details	
Model		SRN-470D	SRN-1670D
Network	Interface	RJ-45, Gigabit Ethernet x 2	RJ-45, Gigabit Ethernet x 2
	Protocols	TCP/IP, DHCP, PPPoE, SMTP, NTP, HTTP, DDNS, RTP, RTSP	TCP/IP, DHCP, PPPoE, SMTP, NTP, HTTP, DDNS, RTP, RTSP
	Program	NET-i Viewer, Webviewer	NET-i Viewer, Webviewer
	Baud rate	MAX 48Mbps, Unlimited(48M)/2/1.5/1 Mbps, 800/600/500/400/300/ 200/100/50 kbps	MAX 48Mbps, Unlimited(48M)/2/1.5/1 Mbps, 800/600/500/400/300/ 200/100/50 kbps
Smart phone	Compatible model	-	-
	Protocol	-	-
	Baud rate	-	-
	Remote user count:	-	-
Control		IR remote control, mouse	IR remote control, mouse
		Permission settings for each user (max 10 users)	Permission settings for each user (max 10 users)
OSD (On Screen Display)		GUI, multilingual support (Korean included)	GUI, multilingual support (Korean included)
Temperature		+0°C to +40°C	+0°C to +40°C
Humidity		20% ~ 85%	20% ~ 85%
Power		DC12V Adaptor,4A,100~250VAC, 50~60Hz, 1.2A	100 to 240 VAC ±10%; 50/60 Hz, 4~1.5A
Power consumption		36W (1x HDD)	56W (1x HDD)
Dimension (W x H x D)		W215.0 x H88.0 x D351.7 mm (W8.46 x H3.46 x D13.85 inch)	W440.0 x H88.0 x D426.8 mm (W17.32 x H3.46 x D16.80 inch)
Weight		3.7Kg	7.1Kg

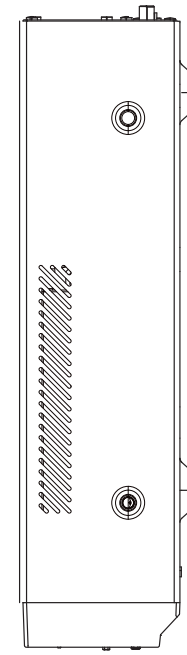
PRODUCT OVERVIEW

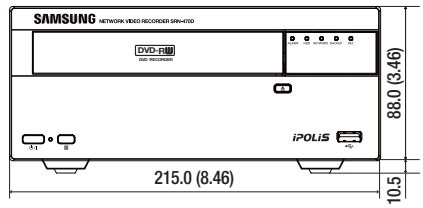
• SRN-470D

unit : mm (inches)



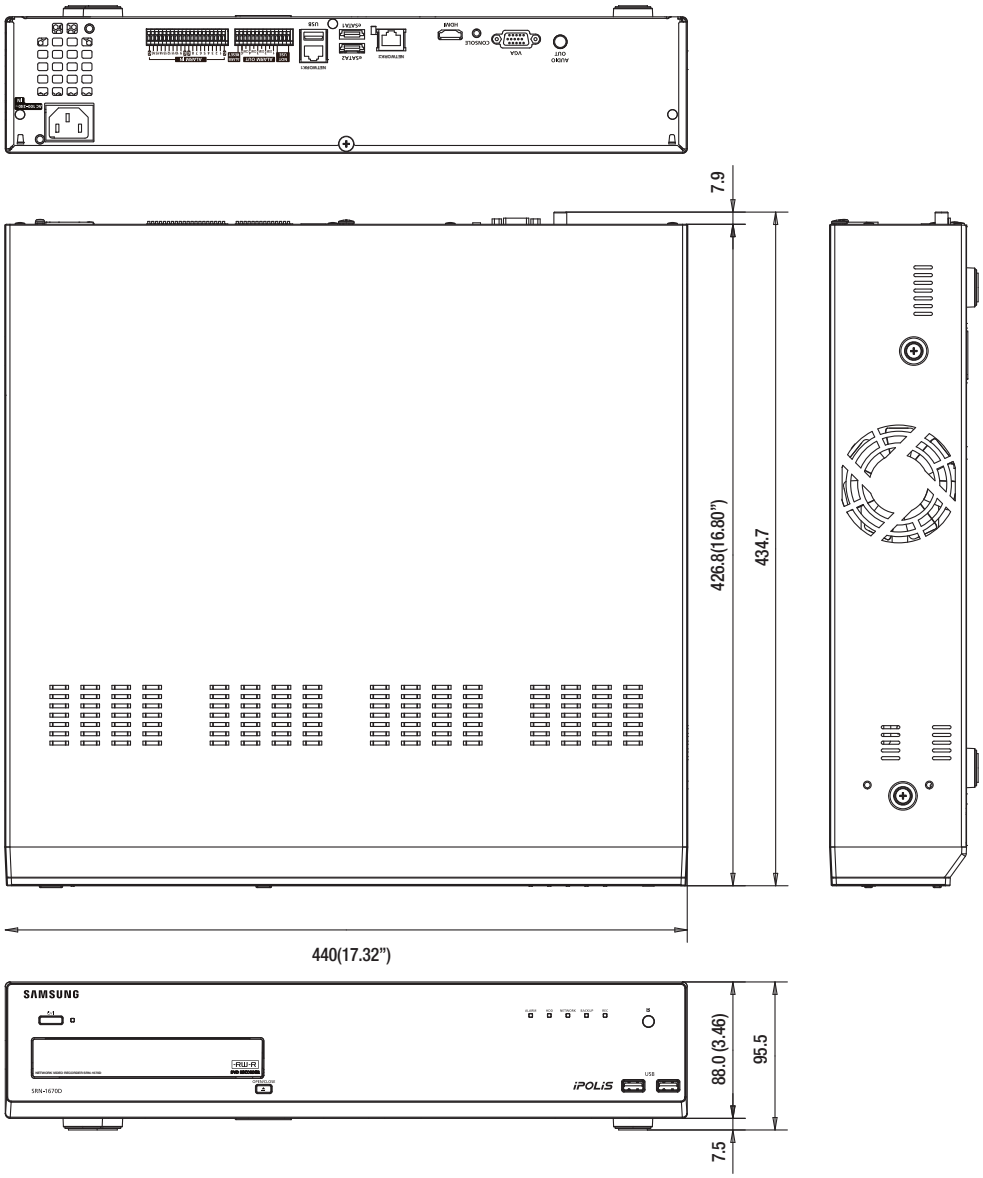






• SRN-1670D

unit : mm (inches)



DEFAULT SETTING

This returns the factory default settings.

To reset the system, move to "**System Management** > **Settings** > **Load Factory Default**" and press the <**Default**> button.

- The default settings are based on SRN-1670D.
- The default password can be exposed to a hacking thread so it is recommended to change the password after installing the product. Note that the security and other related issues caused by the unchanged password shall be responsible for the user.

Category	Details			Factory Default
System	Date/Time/Language	Date/Time/Language	Date	YYYY-MM-DD
			Time	24 hours
			Time Zone	GMT
			Time Sync.	OFF
			DST	OFF
			Language	English
	Permission Management	Admin	ID	admin
			Password	4321
		Group	Group	None
			Group Authority	
		User	Group	All
		Setup	Restricted Access	Backup/Record Stop/ Search/PTZ/Remote Alarm Out/Shutdown
			Restriction on Network Access	
			Auto Log out	3 Min
			Manual Input of ID	
	System Management	System Information	Device Name	NVR
Device	Camera	Camera	Video	ON
			Audio	OFF
			Camera Name	CAM 01 ~ CAM 16
			Dwell Time	5 sec
			Scan Type	Progressive
	Storage Device	HDD Alarm	Check Alarm Output Port	OFF
			Duration	OFF
			Replace Alarm Output Port	OFF
			Duration	OFF
	Remote Device	Remote Control		ON
		ID		00
	Monitor	Monitor	Event Display	OFF
			Display	All
			Multi CH SEQ Time	5 sec
			Video Output	VGA(1280x1024)
			Display Position Setup	30
		Mode	Live Screen	ALL

Category	Details			Factory Default
Record	Recording Schedule	CH1	Event	
	Event Record Duration	Pre Event		OFF
		POST Event		1 min
	Record Setup	Standard REC Rate		Key Frame
		Event REC Rate		Full Frame
	Record Option	Disk End Mode		Overwrite
			Disk End Beep	OFF
		Auto Delete		99
Event	Sensor Detection	NVR	Sensor Operation	OFF
			Cam	Camera No.
			Alarm Out	None
			Duration	10 sec
		Network Camera	Sensor Operation	OFF
			Cam	Camera No.
			Alarm Out	None
			Duration	10 sec
	Motion Detection/ Video Analysis Event		Mode	OFF
			Alarm Out	None
			Alarm Duration	10 sec
	Alarm Out Schedule			Alarm Out1

Category	Details			Factory Default
Network	Connection Mode	Network1	Address Type	Static IP
			Bandwidth	Unlimited
			Static IP	192.168.1. 200
			Gateway	192.168.1.1
			Subnet Mask	255.255.255.0
			DNS	168.126.63.1
		Network2	Address Type	Static IP
			Bandwidth	Unlimited
			Static IP	192.168.2. 200
			Gateway	192.168.2.1
			Subnet Mask	255.255.255.0
			DNS	168.126.63.1
		Advanced	Protocol Type	TCP
			Port (TCP)	554
			Port (UDP)	8000~8159
			Unicast/Multicast	Unicast
			Multicast IP	224.126.63.1
			TTL	5
			Webviewer Port	80
	DDNS	Network1	DDNS Site	OFF
		Network2	DDNS Site	OFF
	Mailing Service	SMTP	Server Type	SMTP mail server
			Porta	25
			Use Authentication	OFF
			Secure Transfer	Never
		Event	Event Interval	10 min
			Use Event Transfer	OFF
		Group	Group	OFF
			Recipient Permission	OFF

TROUBLESHOOTING

Problem	Action
The system does not turn on and the indicator on the front panel does not work at all.	• Check if the power supply system is properly connected. • Check the system for the input voltage from the power source. • If the problem persists even after you have taken the above actions, check the power supplier and replace it with a new one if neccessary. • Check inside if the cables are properly connected. (SMPS, FRONT)
Some channels display just a black screen even if they receive video sources.	• Check if the camera is properly supplied with power. • Check the video output connecting the camera's webviewer. • Check if the network port is properly connected and the network setting is set correctly. • Change the hub supporting Gigabit, it may solves. • Check 4 pin cable connected properly to the front panel. When the cable disconnected it may happen.
If I press the [**REC**] button on the front panel, the REC indicator does not flash, nor the player start recording.	• Check if there is a free space on the HDD for the recording. • Check if the record mode is set to **ON** in the record mode setting.
The screen displays the logo image repeatedly.	• Check 4 pin cable connected properly to the front panel. When the cable disconnected it may happen. • This may occur from a problem with the main board, or the related software is corrupt. Contact the nearest service center for more information.
The Channel button does not work on the Live screen.	• The Channel button does not work if the current screen is in the event monitoring mode. In the event monitoring screen, press the [**ALARM**] button to exit the screen and select a channel.
The cursor will not move to the Start button when I start the calendar search.	• Check if the channel and the date that you want to play are marked with the V symbol. Both channel and date should be checked before you can start playing with the Start button.
No video is played on the connected monitor.	• Check if the necessary cables are connected to the monitor properly. • If the problem persists even in proper connection, move to [**STOP**] ➞ [**ZOOM**] ➞ [**STOP**] ➞ [**ZOOM**] and press [**MENU**] to display the default resolution dialog. From this dialog, specify a desired resolution. You may still view nothing on the screen. Then, the screen will restore the default resolution in a moment. Change the current resolution to a different resolution and apply your change. The video will be displayed in the last specified resolution.
When the alarm sounds, I press the [**ALARM**] button on the remote control to release the alarm but it does not work. The alarm persists and I could not set it off in any way.	• Press the [**MENU**] button on the remote control to release the alarm in the following way: 1) To release the event monitoring mode : Monitoring Mode – set the duration of the event monitoring to Off. 2) To release the alarm sound : Event Record Mode - Alarm (Motion Detection/ Video Loss) – deactivate the alarm sound. 3) To release the event : Event Record Mode - Alarm (Motion Detection/Video Loss) – set the mode to Off.

Problem	Action
No response controlling PTZ in the live viewer	• Check the registered Camera if it support PTZ function.
The camera is not connected or the PC fails to connect to the product.	• Check if the network cable is connected properly. • Ensure that you have set Network – Connection Mode. • Check the IP setting of the PC or camera. • Try the Ping Test. • Check if there is a different device near the product uses the same IP.
The Live screen is too bright or too dark.	• Check the video settings of the registered camera.
Not all of multiple external HDDs that I have installed on the NVR are recognized by the NVR even if I configured the necessary settings properly.	• It may take time to recognize multiple external HDDs. Try again in a minute. If the problem persists and not all of the external HDDs are recognized, that is highly likely to an error of the external HDD it self. Try with a different HDD or HDDs.
A message of “Need to reset date/time.” Is displayed on the screen.	• This message is displayed if there occurs a problem with the time setting of the internal clock or an error in the clock itself. Contact the retailer or the service center for more information.
The time bar is not displayed in Search mode.	• The timeline can switch between normal and extension mode. In extension mode, the time bar may not be displayed in the current timeline. Switch to normal mode or use the left or right button to navigate through the time bar.
The “NO HDD” icon and an error message are displayed.	• Check the HDD for connection. If the problem persists in a normal condition, contact the nearest service center to have the HDD checked by the service personnel.
I have installed an additional HDD on the NVR but it does not recognize the HDD.	• See the compatibilty list to check if the additional HDD is supported by the NVR. For the compatibility list, contact the retailer where you purchased the NVR.
I have connected an external storage device (external eSATA HDD) to the NVR but the NVR seems not to recognize it.	• See the compatibility list of external storage devices to check if the connected device is supported by the NVR. For the compatibility list, contact the retailer where you purchased the NVR.
If I press the ESC key in full screen mode of the WebViewer, the system does not switch to a normal split mode.	• Press the ALT+TAB keys to select ‘ACTIVE MOVIE’ and press the ESC key again. The system will switch to a normal split mode.
I found it difficult to configure the network settings if using the default search, backup and router settings.	• For more information, refer to the user manual. • If you want to check the basics of the product for a quick start, refer to the quick start guide (backup, search). • If you use the router for network connection, refer to the “**Connecting and Setting the Network**” section in this manual.

Problem	Action
I forgot the password.	• Contact the NVR administrator for help.
Backup data is just not played by the PC or NVR.	• When you are backing up data, you have choices about the player either: PC or NVR. Make your selection before proceeding. • If you are using the PC to play the data, the format of the backup file should be either AVI or SEC. • If you are using the NVR for this purpose, formatting backup files should be done by the NVR.
My player does not switch to Live mode while in playback.	• Press the Stop [■] button on the remote control, or click the [■] icon on the launcher to switch to Live mode.
Recording does not work.	• If your player does not display a Live image at all, that indicates recording does not work so first check if you see an image on the screen. • Recording does not work if the recording settings are not properly configured. 1) Manual Record: Press the [**REC**] button on the front panel of the NVR or on the remote control to start recording. 2) Scheduled Record: Specify a desired time in Menu – Record - Recording Schedule. Recording will start at the specified time. - <**Continuous**> Record: Recording will proceed in any conditions at the specified time. - <**Event**> Record: When an event occurs, recording will perform only if the event is of alarm, motion detection and video loss. If there is no event found, recording will not perform. - <**Continuous / Event**> Record: If there is no event found, Continuous recording will perform. Whereas, if an event occurs, Event recording will perform.
The image quality of the recording data is not good.	• Increase the resolution and quality level in Menu – Record – Quality / Resolution. 1) Resolution: Select a bigger size when specifying the recording size. (4CIF>2CIF>CIF) The recording image in the CIF format shows a deteriorated quality as it is enlarged from a small-sized image. 2) Record Quality: Specify a bigger level for the recording quality. • If you increase the resolution and the recording quality, the data size increases accordingly. So the HDD will be filled faster. Overwriting will overwrite the existing data so recording will proceed at a shorter interval.
I pressed the [**REC**] button on the remote control but neither the REC indicator turn on nor recording proceeds.	• In normal recording mode, the REC indicator does not turn on and no screen information is provided. Thus, you cannot check the recording status. • Move to the Record Setup menu and check if the frame rate of normal recording is set to <**OFF**>.

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